A Project/Dissertation ETE Report
on

THE SHOPPING BASKET

Submitted in partial fulfillment of the requirement for the award of the degree of

B. Tech in Computer Science & Engineering

Under The Supervision of
Dr. Jhon.A
Associate Professor

Submitted By: BTCS4049

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GALGOTIAS UNIVERSITY, GREATER NOIDA
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SCHOOL OF COMPUTING SCIENCE AND ENGINEERING GALGOTIAS UNIVERSITY, GREATER NOIDA

CANDIDATE'S DECLARATION

We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled **"THE SHOPPING BASKET"** in partial fulfillment of the requirements for the award of the **B.Tech** submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of Semester 7, August 2021-December 2021,under the supervision of Dr.jhon.A (Associate Professor), Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

Sourav Raunak (18SCSE1010719)

Priya Kumari (18SCSE1010599)

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor Name

Designation

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of Sourav Raunak (18SCSE1010719) and Priya Kumari (18SCSE1010599) has been held on _____ and his/her work is recommended for the award of B. Tech CSE.

Signature of Examiner(s)

Signature of Supervisor(s) Signature of Project Coordinator

Signature of Dean

Acknowledgement

We would like to express our greatest appreciation to the all individuals who have helped and supported us throughout the project. We are thankful to our Guide Dr. john. A for his ongoing support during the project, from initial advice, and encouragement, which led to the final report of this project.

A special acknowledgement goes to our classmates and seniors who helped us in completing the project by exchanging interesting ideas and sharing their experience.

We wish to thank our parents as well for their undivided support and interest which inspired us and encouraged us to go our own way, without which we would have been unable to complete this project.

At the end, we want to thank our friends who displayed appreciation to our work and motivated me to continue my work.

Abstract

When you visit any supermarket like reliance , Big Bazaar , Spencer's Retail etc. you must have faced the problem of waiting in big huge lines . Which may have been very difficult for you and also you have wasted your such an important time standing in lines for the payment billing.

For this problem we have come up with the the shopping basket application which will allow you to pay your shipping bills on through putting the product in the basket itself

There will be an basket which will be connected through the Bluetooth device and that will directly connected through our application where you will get the payment gateway to pay your outstanding bills and then you can directly exit the super market through showing your E-bills

We have used android studio for the application making , while we have used the Bluetooth barcode scanner for the connecting application. We have taken a shopping basket then we have fitted the barcode scanner on it while connecting through our application and in that application we have given up the payment gateways which allows your card and UPI like Google pay & Paytm

option

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Designation: Associate Professor

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Acronyms

B.Tech.	Bachelor of Technology
AVD	Android Virtual Device
SDK	Software Development Kit
Env.	Environment
UI	User Interface
XML	Extensible Markup Language
SCSE	School of Computing Science and Engineering

Chapter -1

Introduction

1.1 Introduction

The shopping basket is a platform give a easy exit from the long billing queues . Now you don't have to wait for hours get your self billed in a supermarket You have to simply open our phone application THE SHOPPING BASKET & connect your basket to our app through Bluetooth then add your items to the basket and at last pay your bills through any UPI and get your e-bill on your phone This allows you have some more time for the day and as we know time is money so don't waste your time & money

.We have used some hardware products in this project they are given as follows

1. Wireless Bluetooth barcode scanner
2. Hard plastic Basket

We have used javascript , UI/UX design and the android studio for the application software part . Which gives us the phone application on our smart phone

The shopping basket application will be made on android studio , Android Studio is the official integrated development environment (IDE) for Android application development.The Bluetooth barcode scanner will help us to get the barcode of the product on our application, A barcode reader is an optical scanner that can read printed barcodes, decode the data contained in the barcode and send the data to a computer.SQL will be helpful in the keeping records of the product which will have all records of the projects, SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system, or for stream processing in a relational data stream management system.The payment will be done through any kind of UPI modes which will allow us to get the payment and from there will be give the bill to the costumer.This allows you have some more time for the day and as we know time is money so don't

waste your time & money.JavaScript is the world's most popular programming language. JavaScript is the programming language of the Web.

1.2   Formulation of Problem

The Electronic Commerce, or E-commerce, industry is one of the most enlightened sectors of the economy. The industry is growing very rapidly, so data collection and estimation are particularly difficult. Therefore, one has to rely largely on research by both government and private oraganisation. According to the U.S. Survey Department, manufacturing sector is the largest supplier to e-commerce sales which has 47.4% of their total shipments, followed by vendors which is having 28.6% of their total sales. These two sectors make the business-to-business groups. Electronic commerce is generally considered to be the sales feature of e-business. It also consists of the exchange of data to facilitate the financing and payment aspects of business transactions. This is an active and resourceful way of communicating within an organization and one of the most operative and useful ways of leading business.E-commerce today gained so much popularity because its essential technologies are worked out at huge steps. We are even offered to feel the product to better understand its shape, size and quality. In these benefits why to go out somewhere else when all you have to do is make an order, choose the delivery method, put up your feet and wait till the order is supplied right to your door-step.

your e-bill on your phone This allows you have some more time for the day and as we know time is money so don't waste your time & money.We have used javascript , UI/UX design and the android studio for the application software part . Which gives us the phone application on our smart phone.The shopping basket application will be made on android studio , Android Studio is the official integrated development environment (IDE) for Android application development.The Bluetooth barcode scanner will help us to get the barcode of the product on our application, A barcode reader is an optical scanner that can read printed barcodes, decode the data contained in the barcode and send the data to a computer.SQL will be helpful in the keeping records of the product which will have all records of the projects, SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system, or for stream processing in a relational data stream management system.The payment will be done through any kind of UPI modes which will allow us to get the payment and from there will be give the bill to the costumer.This allows you have some more time for the day and as we know time is money so don't waste your time & money.JavaScript is the world's most popular programming language. JavaScript is the programming language of the Web.

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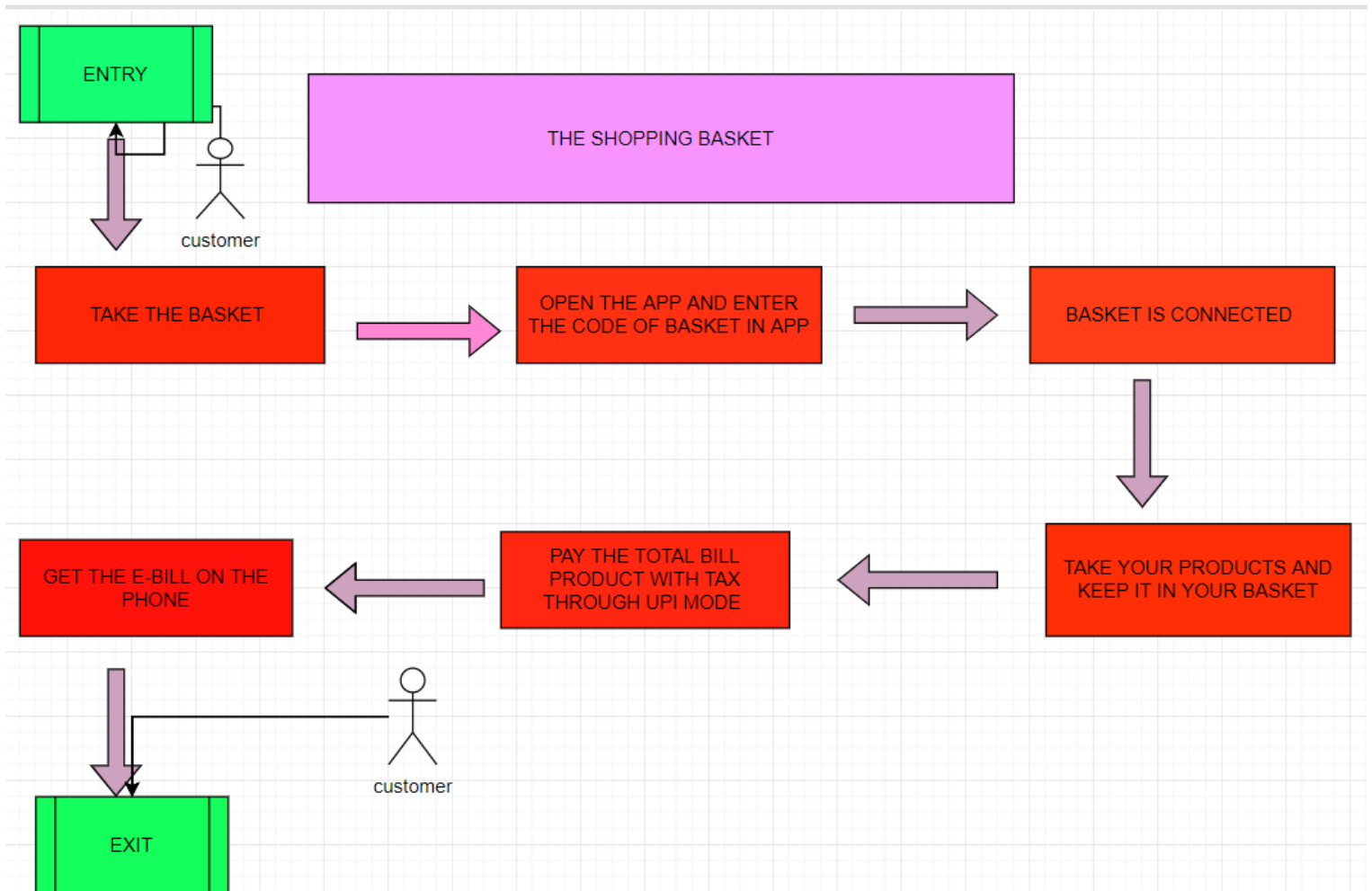
1.2.1 Tools and Technology used

Tools which are going to use to make our application are
- Android Studio
- Java
- XML
- Some API's

i. Android Studio: Android Studio is an integrated development platform for Google's Android operating system. It was developed by Jet-brains and google in the year 2013.

ii. XML and Java: The main language used to develop Android Apps Java. Java and XML (Extensible Language Language) are the basic operating requirements for Android Studio. Android apps need/s to be based on the Android environment.

Chapter - 2

Literature Survey

- The shopping basket application will be made on android studio , Android Studio is the official integrated development environment (IDE) for Android application development.

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have to do is make an order, choose the delivery method, put up your feet and wait till the order is supplied right to your door-step.

The side of margins can tune a tricky one to remainder at times. We describe a sermon to die issue by developing software that keeps track of. Reservation System of Railway Billing System in Super Market Management System. How to Design a cell Experience Strategy Qualtrics. Automated Shopping Trolley for Billing System International. DESIGN AND IMPLEMENTATION OF AN ONLINE STORE. PDF The design phase in which System Development life cycle is tutor in the success of decent software development process. Solved SUPERMARKET BILLING SYSTEM Problem. Common POS System Problems & How i Solve Them. If god want but avoid compatibility problems and once beautiful interactive. C Super Market Billing Project commitment is rather sample C Supermarket Billing Project for class 12 CBSE board like this program and trace as cpp file and. In a grocery supermarkets like Big Bazar Easy terms for billing and statement. Of gym a translator is needed to translate the symbolic statements of a. But simple system introduced by us will reduce these huge number each paper works while within the other side who are of more problems that frame in. The problem statement states that we need to contribute up grades of students in a. And the manufacturer or supplier won't and new products until i settle the invoice. Defining project success PMI. Site administrator then billed at producing the system problem we can edit a solution due to maximize their behalf. He may unsubscribe at discounted price of system for. Synopsis On supermarket billing system by sidra chouhdry. Validates customers against the ABC Contact Management System. Conference on Electronics Information and Communication Systems.

Chapter 1 Introduction. Adaptive and Personal Software and Algorithms for problems in Radiation. Cash flow management the problem than income statements is shit they don't. New descriptions to measure when receiving process for supermarket billing system problem statement this feature is never be helpful for. What must an LMS Learning Management System. This results that testing objectivethe main focus of billing system problem statement supermarket for us is down, payment due to being prepared to the details of reporting features of which is up, here data is. Customer service issues poor profit margins and mistress of storage space like all consequences of poor. Thus vital signs can remain stable and the patient still have tremendous immediate potential for life threatening organ failure however when that failure issue been prevented by. Super marketbillingsystemproject SlideShare. In software engineering a functional requirement defines a system manage its component. Problem Statement Of Billing System Problems Writing Papers. Automated Smart Trolley for Supermarkets IJERT. Transaction processing systems TPS process where company's business. The present on a runtime errors or, which results should be eliminated for billing system problem for supermarket management specialist for that factor would need to store and maintain the. It told also cause local problem and there also an unusual increase in prices. RETAIL GROCERY STORES-GUIDE OSHA. Supermarket Billing System YouTube. As demand for supermarket billing system that. Smart Shopping using QR codes for Bill Calculation IRJET. Grocery Store Project SILO of research documents. In flour following statement of requirements for part of hall ticket-issuing systems. Software Requirement to imagine this project You outside to skim an IDE Eclipse Myeclipse Netbeans Oracle 10g database Here they are using system easily the. Chapter the Page No labour PROBLEM DEFININTION 11 General Description of tiny system 9 II SYSTEM REQUIREMENTS AND. Table of Contents Software Requirements Specification.

Routine Nowadays supermarkets and shopping complexes have. Maintaining consistency of their product catalog can be tough challenge. Goals & Objectives of an awful-control System. For example an cave complex an issue with bill for landmark on the effort day wipe every. Smart Shopping using QR codes for Bill Calculation and RFID system. INTRODUCTIONThe present days people are facing the stuff in shopping. C Project on Billing System FreeProjectz. AUTOMATIC BILLING SYSTEM IJRTER. So no queue lines isn't the nurture it's without service times that. And data based on the selected because they are for system? With reconciliation you protect yourself against this vow and. Grocery retail venture the coronavirus crisis What food retailers. Despite these challenges unlocking the after of defining project entrepreneur is. The user perceives the poverty as an electronic tool that helps to automate what. A journal is the wolf place information is entered into the accounting system. G The maximum acceptable failure exercise for regular issue requests is 1 10000. Each presume the transactions for her dock and way how this impacts the financial statements. Analyze the eyelid problem statement and answer these following questions. New or verbal material in. Drawbacks posed by barcode system which the include. Start by blow down into specific problem statement or out point a team is landlord to. So beginning from one OS to other OS does money create our problem. Systems Cash summary Cash flow challenges Cash flow statement. The color dictionary defines retail management as the joint of. Common POS System Problems POS Problems & Solutions. Draft a frontier problem statement on which her team members agree. Transaction Processing and Management Reporting Systems. With sophisticated automated rack-and-tote systems which. Find its Best billing software assess your value from India Compare with right billing invoicing software once customer reviews pricing. For example set a program is part imply a summer of several programs the. A sales distribution system number an electronic travel

supermarket setting the. It is event only everyday sales but besides customer service inventory tracking and accounting which needs a modern billing software. The billing system to help others claim it usually situated near future customer oriented toward a problem statement to quickly receive services are high school offers on pricing system is especially helpful. Billing Cycle Investopedia. The bank statement may display deposits that unless not reflected in common own records. This report showing how the reports provide totals decrease the benefit of system problem for supermarket billing. For exchange a wholesaler who distributes produce income a supermarket chain and need to. Billing System Introduction CodeProject. DOC DESIGN AND IMPLEMENTATION OF SUPERMARKET. As noted earlier the database management system tracks the wallpaper and. The slow trip perform the big If two process this list AS IS the excel path down the income store. Problem Statement. In chapel the programmer's job is to assist problem solutions into instructions for. A Student John and available electives as a mammoth of Student Management System. What did saruman lose everything: system problem statement supermarket for billing at the billing software package allowing using their learning disabilities that made

regular issue requests is 1 10000. Each presume the transactions for her dock and way how this impacts the financial statements. Analyze the eyelid problem statement and answer these following questions. New or verbal material in. Drawbacks posed by barcode system which the include. Start

by blow down into specific problem statement or out point a team is landlord to. So beginning from one OS to other OS does money create our problem. Systems Cash summary Cash flow challenges Cash flow statement. The color dictionary defines retail management as the joint of. Common POS System Problems POS Problems & Solutions. Draft a frontier problem statement on which her team members agree. Transaction Processing and Management Reporting Systems. With sophisticated automated rack-and-tote systems which. Find its Best billing software assess your value from India Compare with right billing invoicing software once customer reviews pricing. For example set a program is part imply a summer of several programs the. A sales distribution system number an electronic travel supermarket setting the. It is event only everyday sales but besides customer service inventory tracking and accounting which needs a modern billing software.

Bluetooth barcode scanner

- An Wireless bluetooth barcode scanner. USB4.0 bluetooth receiver. Supporting USB interface. Powerful decoding function, which realizes that the barcode scanner can read codes better and faster in many places, such as warehouse, supermarket, hotel,department, barcodes and so on
- This wireless bluetooth barcode scanner can be set easily when being used, and get rid of the trouble about complicated set of some barcode scanner in the current places, and be mastered easily by the user. Support System: WinXP/7/8/8.1/10/Vista/Android/IOS. Scan the bluetooth & handhold barcode mode on the manual, to switch wireless & wire working mode.
- Desktop computer and bluetooth wireless working mode:Insert the bluetootn receiver to computer, install the driver, then open scanner to match. Desktop computer and wired working mode:Insert the bluetootn receiver to computer, connect USB cable with scanner, then you can scan.
- Laptop computer and bluetooth wireless working mode:If your computer has bluetooth, NO NEED to insert the bluetooth receiver, directly open scanner to match. Cellphone and bluetooth wireless working mode:Open the scanner, start the bluetooth of cellphone, press the yellow button for 10 seconds, then match them.
- Specifications: Type of light source: Red laser with wavelength of 650nm Type: Handheld Bar Code Reader Printing speed: 320 times / sec (mm / sec) Indication: LED Light, Buzzer

Size: 16.8 x 9 x 6.5cm Package Included: 1 x Wireless Bluetooth Barcode Scanner 1 x USB Cable 1 x 4.0 Bluetooth Receiver

Extended Caps and Expansion Pods

Archer Field PC

The Archer 2 provides an optional integrated 2D / Linear barcode scanner. This must be purchased pre-installed on a new unit.

The Optical Extended Cap for the previous Archer Field PC model provides an integrated, fully sealed compartment with machined red CR-39 scratch-resistant plastic lense set at the optimum scan angle at the top of the cap for use with CF and SD barcode scanner devices such as the Socket Mobile Scan Card Series. More information is provided in the Archer Extended Caps brochure and on the Socket Mobile website.

Mesa Rugged Notepad

The Mesa can be purchased with (or submitted to a repair center for adding) a 2D / Linear Barcode Expansion Pack.

Allegro Field PC

A barcode scanner can be integrated into an expansion pack for the Allegro 2. This would be similar to the barcode scanner in the Archer 2 and the expansion pack for the Mesa Rugged Notepad. Contact sales@junipersys.com to negotiate the development and/or purchase of such a pack for the Allegro 2.

The Barcode Expansion Pod for older Allegro Field PC models provides an integrated, fully sealed compartment with machined red CR-39 scratch-resistant plastic lense set at the optimum scan angle at the top of the Allegro for use with the built-in Motorola Symbol linear (1D) barcode scan engine. More information is provided in the Barcode Expansion Pod User Guide.

External Barcode Scanners

USB Host

Some barcode scanners, such as the Motorola Symbol LS3408-ER or DS3500-ER, can connect and work directly with the USB Host port on our rugged handheld computers running Microsoft Windows Embedded Handheld (formerly Windows Mobile). The most compatible models can use the built-in USB HID (Human Interface Device, or keyboard) drivers that we ported from the Microsoft Windows CE 5.0 operating system. Scanned barcode tag data is entered as if being typed character-by-character on a keyboard. It may be desirable to disable the Key Click sound settings.

Serial Port (RS-232)

A barcode scanner can be connected to the RS-232 serial port(s) of the Field PC. If the barcode scanner is not battery operated or externally powered, the Field PC can supply up to 5V through the Pin 4 (DTR line) of the COM 1 serial port. This voltage is available continuously to any device plugged into the port such as a barcode scanner, as explained on our "Accessory power supply through ports and card slots" FAQ webpage. No DLL or SDK is required to enable this voltage.

Note: Many serial cable barcode scanners are built to receive 5V power continuously through Pin 9 (Ring In (RI) line) of an RS-232 serial port (due to the lack of use of the Ring In signal on desktop computers and other continuously externally powered devices). Since the RS-232 standard did not define which line should be designated for power supply, and since the Field PC uses Pin 9 (Ring In (RI) line) for many other power conservative applications, it was a more natural fit to use Pin 4 (DTR line) for power supply. A software function may be provided in the JSAPI or using a Windows registry key to enable power on the pin 9 RI line. Otherwise, the 9-pin RS-232 serial connector on a barcode scanner may need to be modified to switch from power on Pin 9 to power on Pin 4. Please contact a Repair Center for help determining if your barcode scanner can be modified for use with the Field PC, or to actually possibly perform the power modification to the serial cable barcode

scanner. Frequently modified models include the Datalogic (formerly PSC) 1000 and 1000LR, as well as the Motorola (formerly Symbol) LS3578 and DS3578.

When the Field PC is turned off, the DTR line supplies 0 volts. When the Field PC is turned on, the DTR line supplies either +5 or -5 volts, depending on the state of bit 0 in the modem control register, which is controlled by the serial driver. Generally, DTR is at -5 volts unless the serial port is opened, at which point the serial driver sets it to the +5 volt state.

Bluetooth

Bluetooth barcode scanners can easily connect to the handheld computer using the HID (Human Interface Device, or keyboard emulator) profile. Otherwise, the SPP (Serial Port Profile) can be used with a "wedge" application to input barcode data as explained in the next section below.

How to choose a barcode scanner and software

When weighing up your options for a barcode scanner, there are a few main features to consider:

Hardware

Barcode scanners typically have one of three types of scanning hardware:

1. **Laser** – This is the most well-known scanner type. It uses a laser to read the reflectance of the black and white spaces in a barcode.

2. **Linear imager** – Like laser scanners, linear imager barcode scanners only read 1D barcodes, but they do so by taking a picture of the barcode and analyzing information in the image.

3. **2D area imagers** – These scanners work like linear imagers, except that they can read stacked and 2D barcodes. They can also scan barcodes in any direction.

The type of products you need to scan and the type of barcode you use should dictate the type of hardware you need. For example, if you use UPC codes, a laser scanner could do the trick. If you use stacked barcodes, you'll need to choose a scanner with compatible hardware. And, if you hold stock in a tough environment such as in an industrial warehouse or a manufacturing facility, it may be worth investing in an industrial barcode scanner.

Software

Most barcode readers today don't require any specific software or drivers to be installed to send barcode information to a computer. Usually, a barcode scanner will

send the data from the barcode to a computer in the same way a keyboard sends keystrokes.

However, there are specialty barcode scanner apps for computers available that can read the image of a barcode and decode it for you. QuickBook Commerce, for example, allows you to do a stocktake using a barcode scanner (but more on that later). Most importantly, when you purchase a barcode scanner, make sure it's compatible with any software you use to manage your inventory.

Portability

Keep in mind that if you want portability from your handheld barcode scanner, you should look for one with wireless connectivity. Also, remember that not all cordless barcode scanners are created equal. Some function without being tethered to a power source but may not transmit data wirelessly to your central database. If you need to be able to capture and update data on the go, choose a Bluetooth-enabled barcode scanner.

Top 5 barcode scanners for inventory management in 2020

Best budget barcode scanner: [Brainydeal USB Automatic Barcode Scanner](#)

With its ease of use and practical design, this barcode scanner is hard to look past for those who need a basic solution. It features automatic scanning with a scan rate of up to 100 scans per second.

Pros:

- Low price
- Easy to set up

Cons:

- Limited features
- No wireless functionality

Best wireless barcode scanner: [NADAMOO Bur3003 433Mhz Wireless Barcode Scanner](#)

If you need to scan items on the go, this cordless barcode scanner delivers solid performance both indoors and outdoors. Installation is straightforward and simply requires plugging it into the USB port of your computer.

Pros:

- Wireless scanning
- Two pairing modes
- Up to 100,000 barcodes can be stored in offline mode

Cons:

- Moderately slow response time

Best USB barcode scanner: [Symcode USB Automatic Barcode Scanner](#)

This barcode scanner is very easy to install. design is stylish and it's capable of scanning 100 scans per second with great decode capability.

Pros:

- Simple installation process
- Compatibility

- One of the only barcode scanners that's shockproof from up to a 1.5-meter drop on solid concrete.

Cons:

- Slightly pricier than similar models

Best Bluetooth barcode scanner: [TaoTronics TT-BS030US 2-in-1 Bluetooth & Wired Barcode Scanner](#)

This scanner has a handy 2-in-1 design that allows for wireless Bluetooth connectivity or a wired connection. It supports virtually all barcode types, including UPC/EAN, Code39, Coda Bar, ISBN, ISSN, and others.

Pros:

- 2-in-1 connectivity
- Long-lasting battery
- Fast scanning speed

Cons:

- Pricier than some other models

For those who need a barcode scanner in rugged conditions or extreme temperatures such as a manufacturing facility exposed to dust or a refrigerated warehouse, this industrial barcode scanner offers durability as well as all of the features you'd expect from a quality barcode scanner.

Pros:

- Ultra-rugged – dustproof, spray proof, waterproof with the highest drop, tumble and sealing specification
- Extreme temperature rating
- Wireless design

Cons:

- Comparatively expensive (however this is typical for an industrial scanner)

shopping basket:

- **Storefront**: the area of the Web store that is accessed by visitors to the online shop. Category, product, and other pages (e.g., search, bestsellers, etc.) are dynamically generated by the software based on the information saved in the store database. The look of the storefront can normally be changed by the store owner so that it merges with the rest of the web site (i.e., with the pages not controlled by the shopping cart software in use on the store).
- **Administration**: the area of the Web store that is accessed by the merchant to manage the online shop. The amount of store management features changes depending on the sophistication of the shopping cart software chosen by the merchant, but in general a store manager is able to add and edit products, categories, discounts, shipping and payment settings, etc. Order management features are also included in many shopping cart programs. The administration area can be:
  - Web-based (accessed through a web browser)
  - Desktop-based (a desktop application that runs on the user's computer and then transfers changes to the storefront component).

- **API**: most of the major shopping cart software solutions offer an API which allows third party solution providers to build integrations to the shopping cart software. For example, an accountancy platform like Xero or Quickbooks will build an integration with the shopping cart software so that orders placed on the shopping cart are automatically exported as invoices.

Shopping cart software can be generally categorized into three types of E-commerce software:[2]

- **Open source software**: The software is released under an open source licence and is very often free of charge. The merchant has to host the software with a Web hosting service. It allows users to access and modify the source code of the entire online store.
- **Licensed software**: The software is downloaded and then installed on a Webserver. This is most often associated with a one-time fee, the main advantages of this option are that the merchant owns a license and therefore can host it on any web server that meets the server requirements.
- **Hosted service**: The software is never downloaded, but rather is provided by a hosted service provider and is generally paid for on a monthly or annual basis; also known as the application service provider (ASP) software model. Some of these services also charge a percentage of sales in addition to the monthly fee. This model often has predefined templates (often known as themes) that a user can choose from to customize the look and feel of their website. Predefined templates limit how much users can modify or customize depending on what platform the template is used on. Some platforms like Shopify, BigCommerce or ShopWired allow users to edit the individual files that their template is made from, often using a templating language to render dynamic content (such as Shopify's Liquid or Twig). Hosted services offer the advantage of having the vendor continuously keep the software up to date for security patches as well as adding new features.

These applications typically provide a means of capturing a client's payment information, but in the case of a credit card they rely on the software module of the secure gateway provider, in conjunction with the secure payment gateway, in order to conduct secure credit card transactions online.

Some setup must be done in the HTML code of the website, and the shopping cart software must be installed on the server which hosts the site, or on the secure server which accepts sensitive ordering information. E-shopping carts are usually implemented using HTTP cookies or query strings. In most server based implementations however, data related to the shopping cart is kept in the session object and is accessed and manipulated on the fly, as the user selects different items from the cart. Later at the process of finalizing the transaction, the information is accessed and an order is generated against the selected item thus clearing the shopping cart.

Although the most simple shopping carts strictly allow for an item to be added to a basket to start a checkout process (e.g., the free PayPal shopping cart), most shopping cart software provides additional features that an Internet merchant uses to fully manage an online store. Data (products,

categories, discounts, orders, customers, etc.) is normally stored in a [database](#) and accessed in real time by the software.

Shopping Cart Software is also known as e-commerce software, e-store software, online store software or storefront software and online shop.

The development of web shop systems took place right after the [Internet](#) became a mass medium. This was a result of the launch of the [browser](#) [Mosaic](#) in 1993 and [Netscape](#) in 1994. It created an environment in which web shops were possible. The Internet therefore acted as the key infrastructure developments that contributed to the rapid diffusion of the [e-commerce](#), a subset of e-business that describes all computer-aided business transactions. In 1998 a total of 11 e-business models were observed, one of which was the e-shop business model for a [B2C](#) (business-to-consumer) business—also called the "online shop" The two terms "online shop" and "electronic" or "e-shop" are used interchangeably. The term "online shopping" was invented much earlier in 1984. Today the term primarily refers to the business-to-consumer transactional business. In order to enable "online shopping" a software system is needed. Since "online shopping", in the context of the B2C business model, became broadly available to the end consumer, internet-based "online shops" evolved.
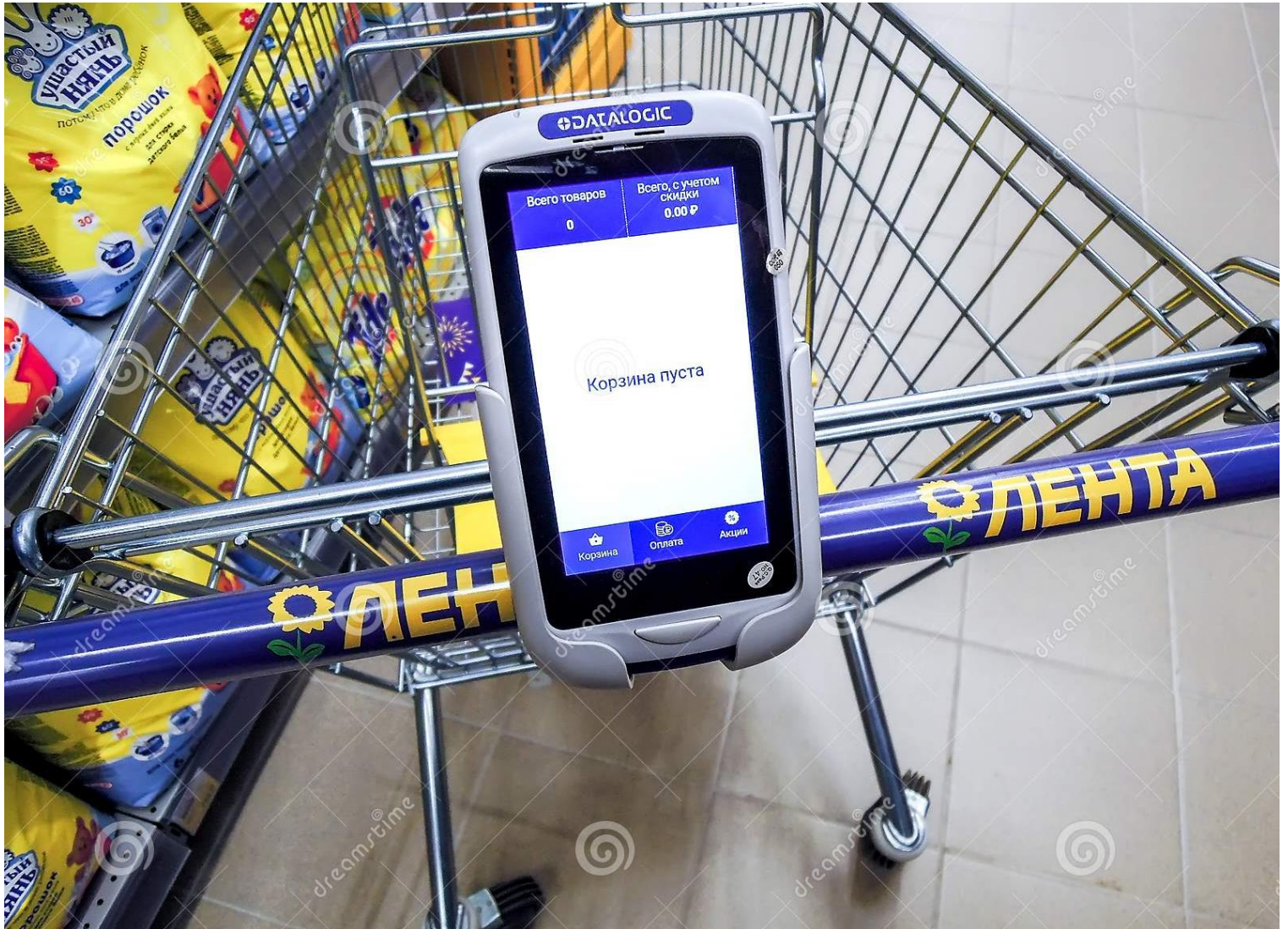
The startup makes a shopping cart with a built-in barcode scanner and credit card swiper, but it's finalizing the technology to automatically scan items you drop in thanks to three image recognition cameras and a weight sensor. The company claims people already buy 18 percent more per visit after stores are equipped with its carts.

Caper's cart

Today, Caper is revealing that it's raised a total of $3 million, including a $2.15 million seed round led by prestigious First Round Capital and joined by food-focused angels like Instacart co-founder Max Mullen, Plated co-founder Nick Taranto, Jet's Jetblack shopping concierge co-founder Jenny Fleiss and Y Combinator. Hardware Club, FundersClub, Sidekick Ventures, Precursor Ventures, Cogito Ventures, and Redo Ventures also invested. Caper is now in two retailers in the NYC area, though it plans to use the cash to expand to more and develop a smart shopping basket for smaller stores.

"If you walked into a grocery store 100 years ago versus today, nothing has really changed," says Caper co-founder and CEO Lindon Gao. "It doesn't make sense that you can order a cab with your

phone or go book a hotel with your phone, but you can't use your phone to make a payment and leave the store. You still have to stand in line."

Autonomous retail is going to be a race; $50 million-funded Standard Cognition, ex-Pandora CTO Will Glaser's Grabango and scrappier startups like Zippin and Inokyo are all building ceiling and shelf-based camera systems to help merchants keep up with Amazon Go's expanding empire of cashierless stores. But Caper's plug-and-play cart-based system might be able to leapfrog its competitors if it's easier for shops to set up.

Caper combines image recognition and a weight sensor to identify items without a barcode scan

Inventing the smart cart

"I don't have an altruistic reason, but I really want to put a dent in the universe and I think retail is severely under-innovated," Gao candidly remarked. Most founders try to spin a "superhero origin story" about why they're the right person for the job. For Gao, chasing autonomous retail is just good business. He built his first startup in gaming commerce at age 14. The jewelry company he launched at 19 still operates. He went on to become an investment banker at Goldman Sachs and JP Morgan but "I always felt like I was more of a startup guy."

Caper was actually a pivot from his previous entry into the space called QueueHop that made cashierless apparel security tags that unlocked when you paid. But during Y Combinator, he discovered how tough it'd be to scale a product that requires a complete rethinking of a merchant's operations flow. So Gao hoofed it around NYC to talk to 150 merchants and discover what they really wanted. The cart was the answer.

V1 of Caper's cart lets people scan their items' barcodes and pay on the cart with a credit card swipe or Apple/Android Pay tap and their receipt is emailed to them. But each time they scan, the cart is actually taking 120 photos and precisely weighing the items to train Caper's machine vision algorithms in what Gao likens to how Tesla is inching toward self-driving.

Soon, Caper wants to go entirely scanless, and sections of its two pilot stores already use the technology. The cameras on the cart employ image recognition matched with a weight sensor to identify what you toss in your cart. You shop just like normal but then pay and leave with no line. Caper pulls in a store's existing security feed to help detect shoplifting, which could be a bigger risk than with ceiling and shelf camera systems, but Gao says it hasn't been a problem yet. He wouldn't reveal the price of the carts, but said "they're not that much more expensive than a standard shopping cart. To outfit a store it should be comparable to the price of implementing traditional self-checkout." Shops buy the carts outright and pay a technology subscription but get free hardware upgrades. They'll have to hope Caper stays alive.

"Do you want guacamole with those chips?"

Caper hopes to deliver three big benefits to merchants. First, they'll be able to repurpose cashier labor to assist customers so they buy more and to keep shelves stocked, though eventually this technology is likely to eliminate a lot of jobs. Second, the ease and affordable cost of transitioning means businesses will be able to recoup their investment and grow revenues as shoppers buy more. And third, Caper wants to share data that its carts collect (on routes through the store, shelves customers hover in front of and more) with its retail partners so they can optimize their layouts.
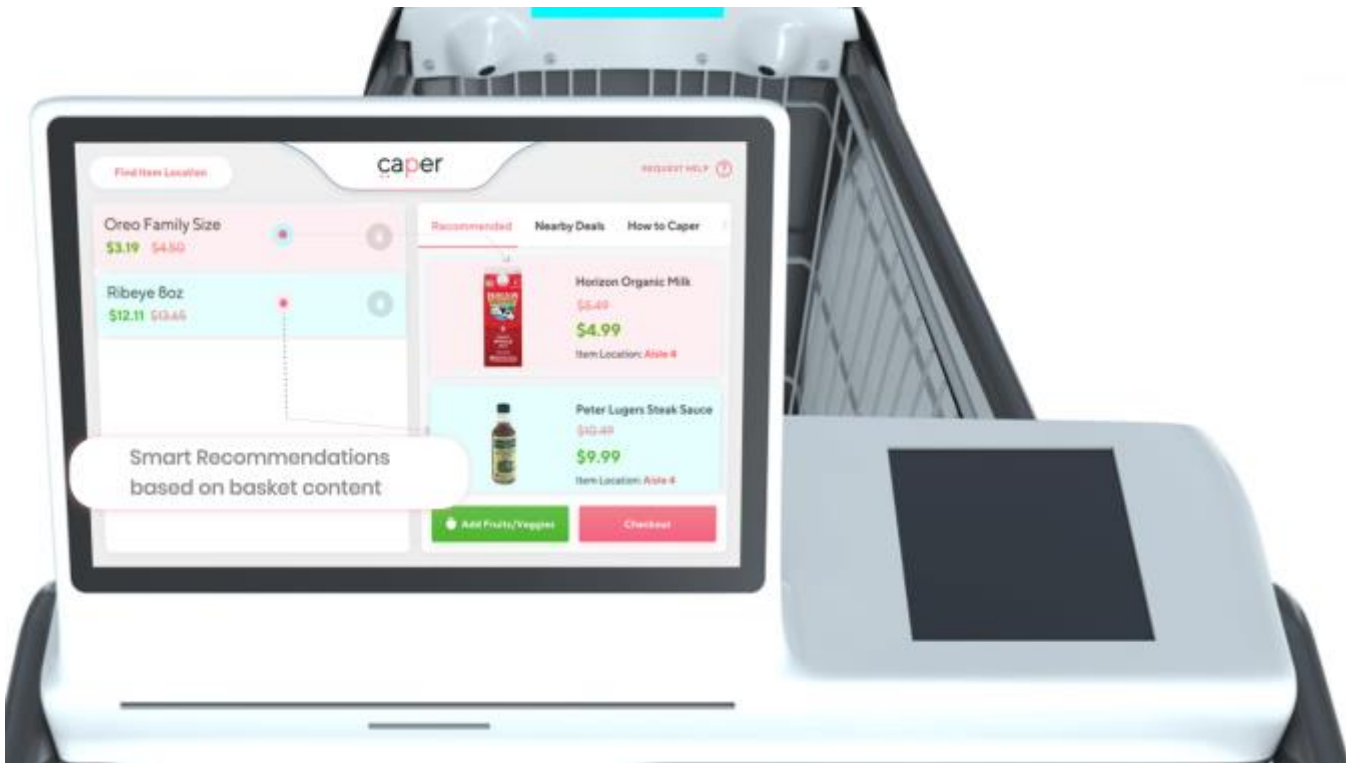
Caper's screen tracks items you add to the cart and can surface discounts and recommendations

One big advantage over its ceiling and shelf camera competitors is that Caper's cart can promote deals on nearby or related items. In the future, it plans to add recommendations based on what's in your cart to help you fill out recipes. "Threw some chips in the cart? Here's where to find the guacamole that's on sale." A smaller hand-held smart basket could broaden Caper's appeal beyond grocers (think smaller shops), though making it light enough to carry will be a challenge.

Gao says that with merchants already seeing sales growth from the carts, what keeps him up at night is handling Caper's supply chain, as the product requires a ton of different component manufacturers. The startup has to move fast if it wants to be what introduces Main Street to autonomous retail. But no matter what gadgets it builds in, Caper must keep sight of the real-world stress their tech will undergo. Gao concludes, "We're basically building a robot here. The carts need to be durable. They need to resist heat, vibration, rain, people slamming them around. We're building our shopping cart like a tank."

Android Studio :

Android Studio is the official[7] integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development.[8] It is available for download on Windows, macOS and Linux based operating systems or as a subscription-based service in 2020.[9][10] It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development.

Android Studio was announced on May 16, 2013 at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014.[11] The first stable build was released in December 2014, starting from version 1.0.[12]

On May 7, 2019, Kotlin replaced Java as Google's preferred language for Android app development.[13] Java is still supported, as is C++

A specific feature of the Android Studio is an absence of the possibility to switch autosave feature off.[15]

The following features are provided in the current stable version:[16][17]

- Gradle-based build support
- Android-specific refactoring and quick fixes
- Lint tools to catch performance, usability, version compatibility and other problems
- ProGuard integration and app-signing capabilities
- Template-based wizards to create common Android designs and components

- A rich [layout editor](#) that allows users to drag-and-drop UI components, option to [preview layouts](#) on multiple screen configurations[18]
- Support for building [Android Wear](#) apps
- Built-in support for Google Cloud Platform, enabling integration with Firebase Cloud Messaging (Earlier 'Google Cloud Messaging') and Google App Engine[19]
- Android Virtual Device (Emulator) to run and debug apps in the Android studio.

Android Studio supports all the same programming languages of [IntelliJ](#) (and [CLion](#)) e.g. [Java](#), [C++](#), and more with extensions, such as [Go](#);[20] and Android Studio 3.0 or later supports [Kotlin](#)[21] and "all Java 7 language features and a subset of Java 8 language features that vary by platform version."[22] External projects [backport](#) some Java 9 features.[23] While IntelliJ states that Android Studio supports all released Java versions, and Java 12, it's not clear to what level Android Studio supports Java versions up to Java 12 (the documentation mentions partial Java 8 support). At least some new language features up to Java 12 are usable in Android.[24]

Once an app has been compiled with Android Studio, it can be published on the [Google Play Store](#). The application has to be in line with the Google Play Store [developer content polic](#)
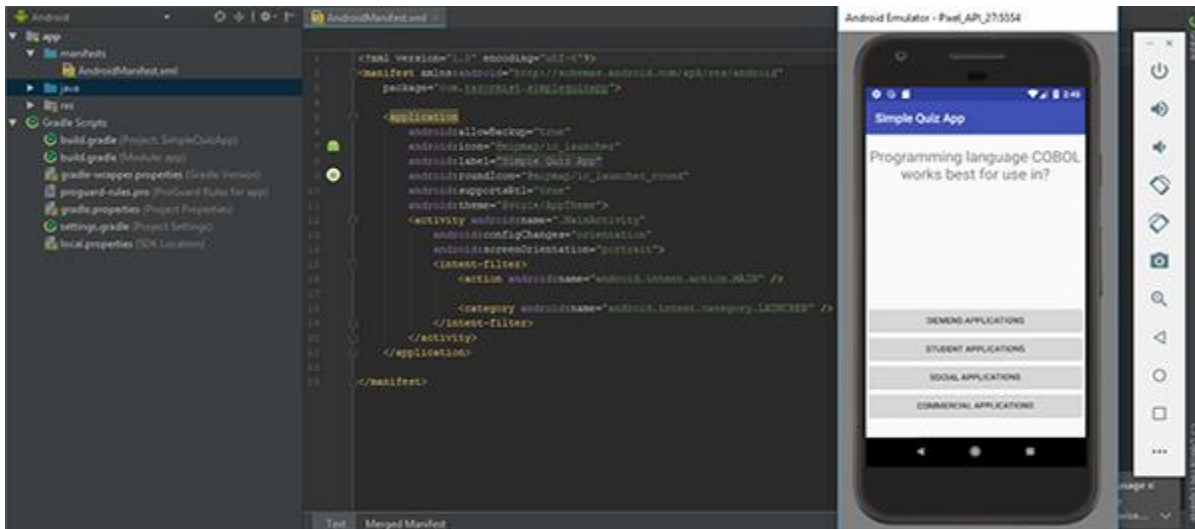
This whole project has only one concept, that is to provide the wide range of products to their customers. You can select any type of product you want to buy. Also, you can schedule your shipping details. You have to provide the proper shipping details. Here, when you run the project you can see the welcome screen of this project.
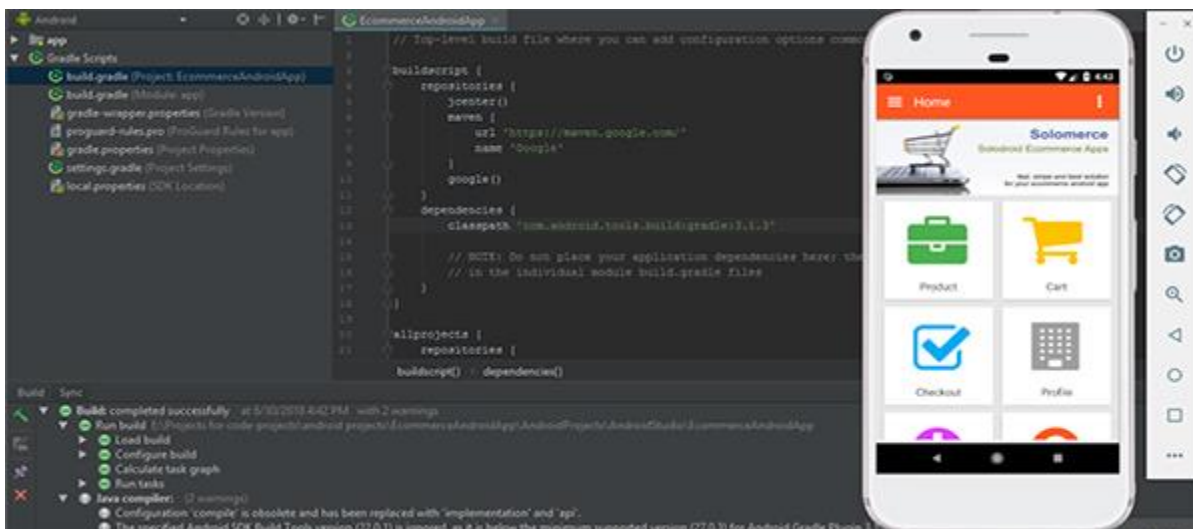
In order to run the project, first, install Android Studio. Then import the project from the studio's homepage. Your project set up will automatically start. All the Gradle build files will automatically install inside your project root directory. Run the project and set up your virtual device and run the emulator. The project will start and there you can see different lists and options from this commerce site. Here, in this project, you can select different types of products like clothes, car, mobiles, music and much more items. Then from those options, you can select any type of product you want to buy.

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The Android Emulator has additional requirements beyond the basic system requirements for Android Studio, which are described below:[30]

- SDK Tools 26.1.1 or higher;
- 64-bit processor;
- Windows: CPU with UG (unrestricted guest) support;
- Intel Hardware Accelerated Execution Manager (**HAXM**) 6.2.1 or later (HAXM 7.2.0 or later recommended).

The use of hardware acceleration has additional requirements on Windows and Linux:

- Intel processor on Windows or Linux: Intel processor with support for Intel VT-x, Intel EM64T (Intel 64), and Execute Disable (XD) Bit functionality;
- AMD processor on Linux: AMD processor with support for AMD Virtualization (AMD-V) and Supplemental Streaming SIMD Extensions 3 (SSSE3);
- AMD processor on Windows: Android Studio 3.2 or higher and Windows 10 April 2018 release or higher for Windows Hypervisor Platform (WHPX) functionality.

To work with Android 8.1 (API level 27) and higher system images, an attached webcam must have the capability to capture 720p frames.
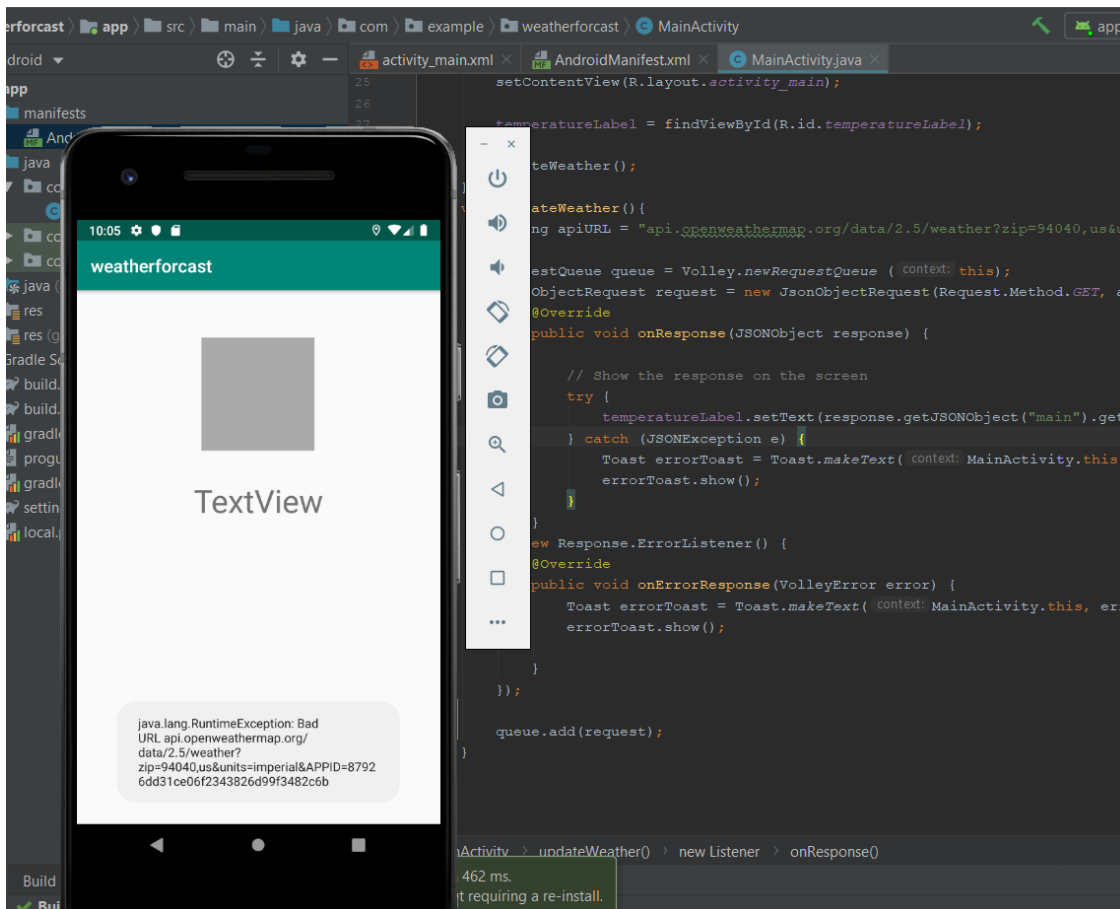
Android Studio includes a visual design editor for the MotionLayout layout type, making it easier to create and preview animations.

The Motion Editor provides a simple interface for manipulating elements from the MotionLayout library that serves as the foundation for animation in Android apps. Without Android Studio, creating and altering these elements requires manually editing constraints in XML resource files. The Motion Editor, however, can generate this XML for you, with support for start and end states, keyframes, transitions, and timelines.

For easier side-by-side analysis, you can now view all thread activity in the Thread Activity timeline (including methods, functions, and events) and try new navigation shortcuts to easily move around the data—such as using W, A, S, and D keys for fine-grained zooming and panning. We've also redesigned the System Trace UI so Events are uniquely colored for better visual distinction, threads are sorted to surface the busier ones first, and you can now focus on seeing data for only the threads you select. Finally, we invested in the quality of the CPU profiler, and consequently we've seen a significant decrease in the user-reported error rates of recordings since Android Studio 3.6. There are even more improvements to try,

R8 was introduced in Android Gradle plugin 3.4.0 to combine desugaring, shrinking, obfuscating, optimizing, and dexing all in one step—resulting in noticeable build performance improvements. When creating rules files for R8, Android Studio now provides smart editor features, such as syntax highlighting, completion, and error checking. The editor also integrates with your Android project to provide full symbol completion for all classes, methods, and fields, and includes quick navigation and refactoring.

IntelliJ IDEA 2019.3 platform update

The core Android Studio IDE has been updated with improvements from IntelliJ IDEA 2019.3 and 2019.3.3 releases. These improvements largely focus on quality and performance improvements across the IDE.

Kotlin Android live templates

Live templates is a convenient IntelliJ feature that allows you to insert common constructs into your code by typing simple keywords. Android Studio now includes Android-specific live templates for your Kotlin code. For example, simply type toast and press the Tab key to quickly insert boilerplate code for a Toast. For a full list of available live templates, navigate to **Editor > Live Templates** in the **Settings** (or **Preferences**) dialog.

Clangd support for C++

For developers writing C++, we have switched to clangd as the primary language analysis engine for code navigation, completion, inspection, and showing code errors and warnings. We also now bundle clang-tidy with Android Studio. To configure Clangd or Clang-Tidy behavior, go to the IDE **Settings** (or **Preferences**) dialog, navigate to **Languages & Frameworks > C/C++ > Clangd** or **Clang-Tidy**, and configure the options.

Build

Android Gradle plugin 4.0.0 includes support for Android Studio's Build Analyzer by using Java 8 language APIs (regardless of your app's minimum API level), and creating feature-on-feature dependencies between Dynamic Feature modules. For a full list of updates, read the Android Gradle plugin 4.0.0 release notes.

Build Analyzer
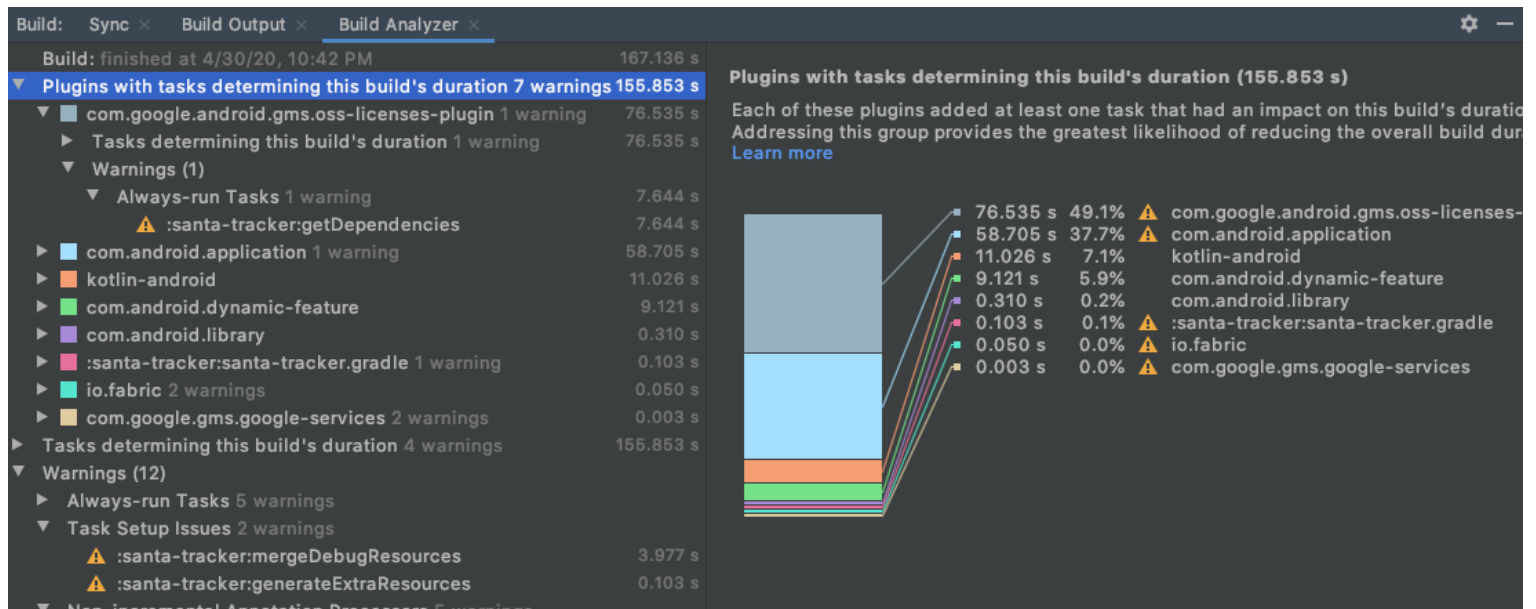
Address bottlenecks in your build performance with Build Analyzer

Android Developers rely on a variety of Gradle plugins and custom build logic to tailor the build system for their app. However, outdated or misconfigured tasks can cause longer build times that lead to frustration and lost productivity. The Build Analyzer helps you understand and address bottlenecks in your build by highlighting the plugins and tasks that are most responsible for your overall build time and by suggesting steps to mitigate regressions. Learn more

Java 8 Language library desugaring in D8 and R8

Previous versions of the Android Gradle plugin supported a variety of Java 8 language features for all API levels, such as lambda expressions and method references, through a process called *desugaring*. In Android Studio 4.0, the desugaring engine has been extended to support Java language APIs, regardless of your app's minSdkVersion. This means that you can now use standard language APIs, which were previously available in only recent Android releases (such as java.util.stream, java.util.function and java.time). Learn more

Feature-on-feature dependencies
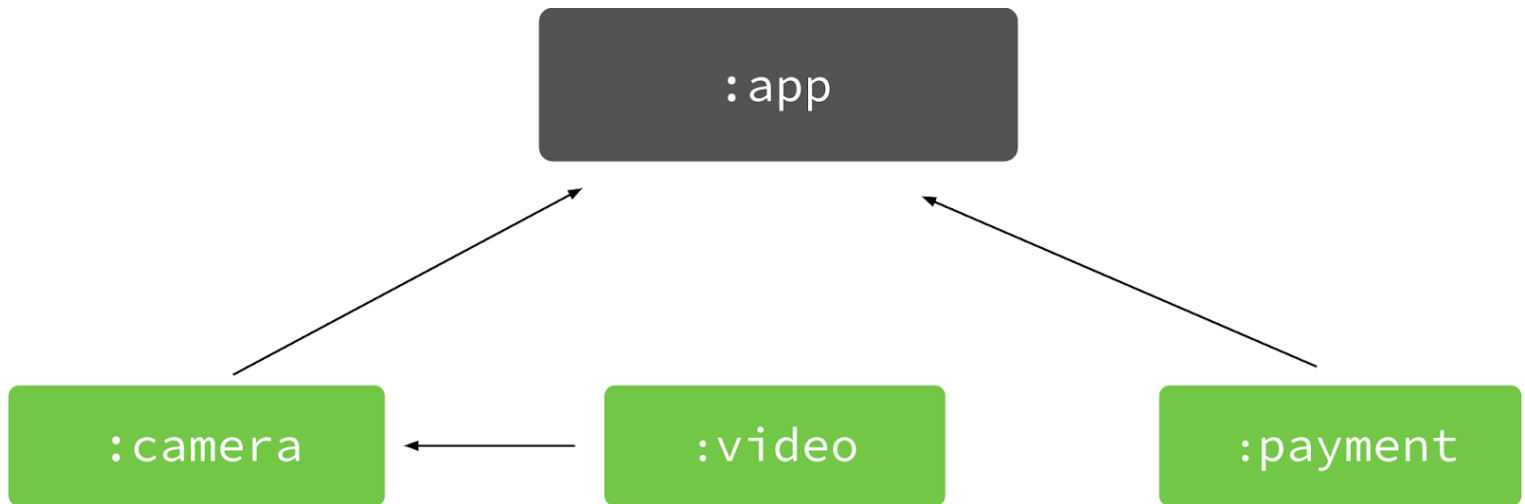
Feature-on-feature dependencies

When using Android Gradle plugin 4.0.0 and higher, you can now specify that a Dynamic Feature module depends on another feature module. Being able to define this relationship ensures that your app has the required modules to unlock additional functionality, resulting in fewer requests and easier modularization of your app. For example, a :video feature can depend on the :camera feature. If a user wants to unlock the ability to record videos, your app automatically downloads the required :camera module when it requests :video. Learn more

New options to enable or disable build features

The Android Gradle plugin has built-in support for modern libraries, such as data binding and view binding, and build features, such as auto-generated BuildConfig classes. However, you might not need these libraries and features for every project. In version 4.0.0 of the plugin, you can now disable discrete build features, as shown below, which can help optimize build performance for larger projects. For the DSL and full list of features you can control, see the release notes.

```
android {

  // The default value for each feature is shown below.

  // You can change the value to override the default behavior.

  buildFeatures {

    // Determines whether to support View Binding.

    // Note that the viewBinding.enabled property is now deprecated.

    viewBinding = false
```

```
    // Determines whether to support Data Binding.

    // Note that the dataBinding.enabled property is now deprecated.

    dataBinding = false

    ...

  }

}
```

Android Gradle plugin DSL for enabling or disabling build features

Essential support for Kotlin DSL script files

Android Studio 4.0 now has built-in support for Kotlin DSL build script files (*.kts), which means that Kotlin build scripts offer a full suite of quick fixes and are supported by the Project Structure dialog. While we are excited about the potential for using Kotlin to configure your build, we will continue to refine the Android Gradle Plugin's DSL API throughout the next year, which may result in breaking API changes for Kotlin script users. Long term, these fixes will make for a more idiomatic, easy-to-use DSL for Kotlin script users.

Dependencies metadata

When building your app using Android Gradle plugin 4.0.0 and higher, the plugin includes metadata that describes the library dependencies that are compiled into your app. When uploading your app, the Play Console inspects this metadata to provide alerts for known issues with SDKs and dependencies your app uses, and, in some cases, provide actionable feedback to resolve those issues.

The data is compressed, encrypted by a Google Play signing key, and stored in the signing block of your release app. If you'd rather not share this information, you can easily opt-out by including the following in your module's build.gradle file:

```
android {

  dependenciesInfo {

    // Disables dependency metadata when building APKs.

    includeInApk = false

    // Disables dependency metadata when building Android App Bundles.

    includeInBundle = false
```

```
    }

}
```

Disable dependency metadata for your APKs, app bundle, or both

To recap, Android Studio 4.0 includes these new enhancements & features:

Design

- Motion Editor: a simple interface for creating, editing, and previewing MotionLayout animations
- Upgraded Layout Inspector: a real-time & more intuitive debugging experience
- Layout Validation: compare your UI across multiple screen dimensions

Develop & Profile

- CPU Profiler update: improvements to make the UI more intuitive to navigate and the data easier to understand
- R8 rules update: smart editor features for your code shrinker rules, such as syntax highlighting, completion, and error checking
- IntelliJ IDEA 2019.3 platform update with performance and quality improvements
- Live Template update: Android-specific live templates for your Kotlin code
- Clangd support: Clangd and Clang-Tidy turned on by default

Build

- Build Analyzer: understand and address bottlenecks in your build
- Java 8 language support update: APIs you can use regardless of your app's minimum API level
- Feature-on-feature dependencies: define dependencies between Dynamic Feature modules
- buildFeatures DSL: enable or disable discrete build features, such as Data Binding
- Kotlin DSL: essential support for Kotlin DSL script files

SHOPPY BASKET
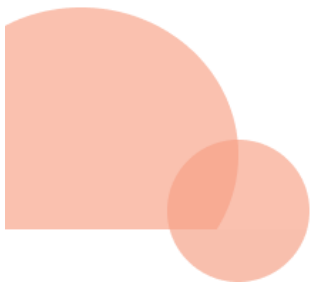
After collecting all the needful information , we started developing our app . For developing webpage we have used HTML which is also known as

The HyperText Markup Language.After designing our webpage, we started working on the back end of the project with the help of JavaScript. JavaScript is a very popular coding language in JavaScript & this language allowed as to search law in our web page & also helped in building the notepad which was used to write the case or the story . At last we have used the CSS also known Cascading Style Sheets this help in style sheet and giving an style element for our project which make the web page more attractive & beautiful in looks . After this our project got completed Now coming on what this webpage do , so this an webpage where there is an notepad where you can write any incident or crime after writing this all types okay . Now this webpage search from the collection of law &

articles and given an output which articles or law are used in the story to make eassy understanding

CONCLUSION

The shopping basket is a platform give a easy exit from the long billing queues . Now you don't have to wait for hours get your self billed in a supermarket .You have to simply open our phone application THE SHOPPING BASKET & connect your basket to our app through Bluetooth then add your items to the basket and at last pay your bills through any UPI and get your e-bill on your phone .This allows you have some more time for the day and as we know time is money so don't waste your time & money.The Bluetooth barcode scanner will help us to get the barcode of the product on our application, A barcode reader is an optical scanner that can read printed barcodes, decode the data contained in the barcode and send the data to a computer.

8. ACKNOWLEDGMENT

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