

# CLOUD COMPUTING FOR BIG DATA CAPSTONE PROJECT

## CANTEEN MANAGEMENT SYSTEMS



*Presented by- Group 10*

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# INTRODUCTION

- Nowadays people don't have much time to spend in canteen.
- Many customer visits the canteen in their lunch break and recess so they have limited time to eat and return to their respective office and colleges.
- Manual system involves paper work in the form of maintaining various files and manuals.
- Maintaining critical information in the files and manuals is full of risk and a tedious process.

## EXISTING SYSTEM

- Manual systems
- Queues for ordering food
- Maintaining Paper Based Records of sales



# PROPOSED SYSTEM

➤ Smart Canteen is a Progressive Web Application that it greatly simplifies the ordering process for both the customer and the canteen.

- Online Ordering
- View daily, weekly and monthly sales
- Predictions of food items in high demand
- Up-to-date Menu
- Online Payments
- Ratings and Feedback



# REQUIREMENTS

## Software Requirements:

- Platform - Windows / Ubuntu OS
- Front End - HTML, CSS, JavaScript
- Back End - Django, Sqlite

## Hardware Requirements:

- Processor Name - Intel Core i5 7th Gen
- Hard Disk Capacity 1TB
- RAM Capacity - 4GB

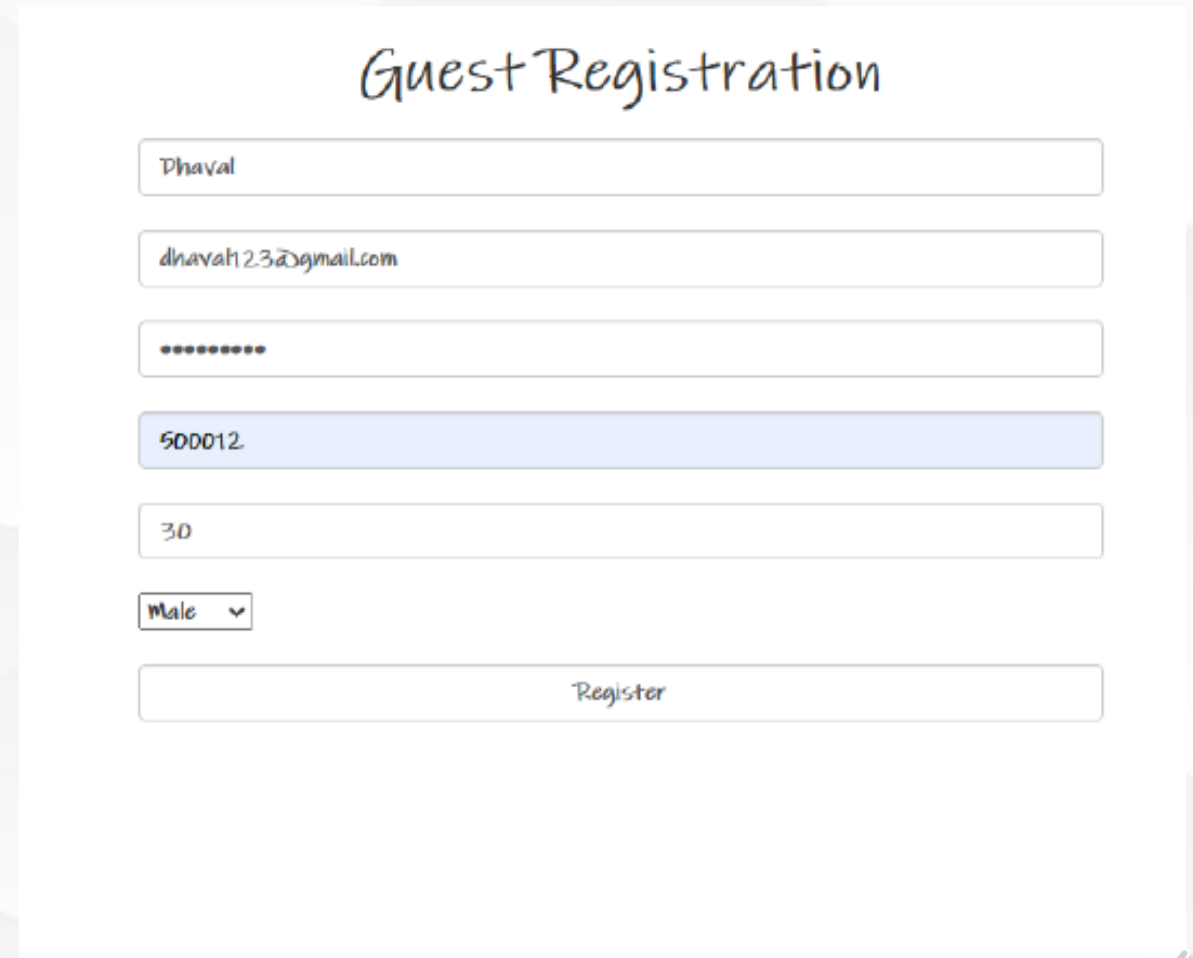
## MAIN MODULES OF THE PROJECT

- Student Module
- Guest Module
- Canteen Incharge



# GUEST SIGN UP MODULE

- Guest Registration Module
- Guest need to register themselves first to be able to log into the application.
- All the fields are mandatory fields to be filled in for registration.
- For email, unless the whole email ID is filled it will not register.



The screenshot shows a 'Guest Registration' form with the following fields and values:

- Name:** Dhaval
- Email:** dhaval123@gmail.com
- Password:** (masked with 8 dots)
- Phone Number:** 500012
- Age:** 30
- Gender:** Male (dropdown menu)
- Register Button:** A button labeled 'Register'.



# GUEST LOGIN MODULE

- Guest Login
- Registered Guest will be directed to the login page and can login with credentials
- After login successfully guest can see their given Firstname on the home page of guest with four different links

The image displays two screenshots of a web application titled "CANTEEN MANAGEMENT SYSTEM".

The top screenshot shows the "Guest Login" page. It features a navigation bar with links: Home, Student, Signup, Guest, Guest Signup, and Canteen Incharge. The main content area has the heading "Guest Login" and two input fields: one for the email address (containing "dhaval123@gmail.com") and one for the password (containing "\*\*\*\*\*"). Below these fields is a "Login" button.

The bottom screenshot shows the user's home page after a successful login. The navigation bar now includes links: Home, View Items, Cart, and Logout. The main content area displays the message "Welcome Dhaval".



# STUDENT SIGN UP MODULE

- Students need to register themselves first to be able to log into the application.
- All the fields are mandatory fields to be filled in for registration.
- For email, unless the whole email ID is filled it will not register.

## Student Registration



# STUDENT SIGN IN MODULE

- After registering the students can log in to the application with their email ID.
- Students again need to type in the whole ID to be able to log in.
- After logging in, it welcomes the customer with four more options in the menu bar.

## Student Login

Please include an '@' in the email address. 'c0752287' is missing an '@'.

Login

[Home](#) [View Items](#) [Cart](#) [Logout](#)

Welcome Sheeba



# STUDENT SIGN IN MODULE

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[Home](#)[View Items](#)[Cart](#)[Logout](#)

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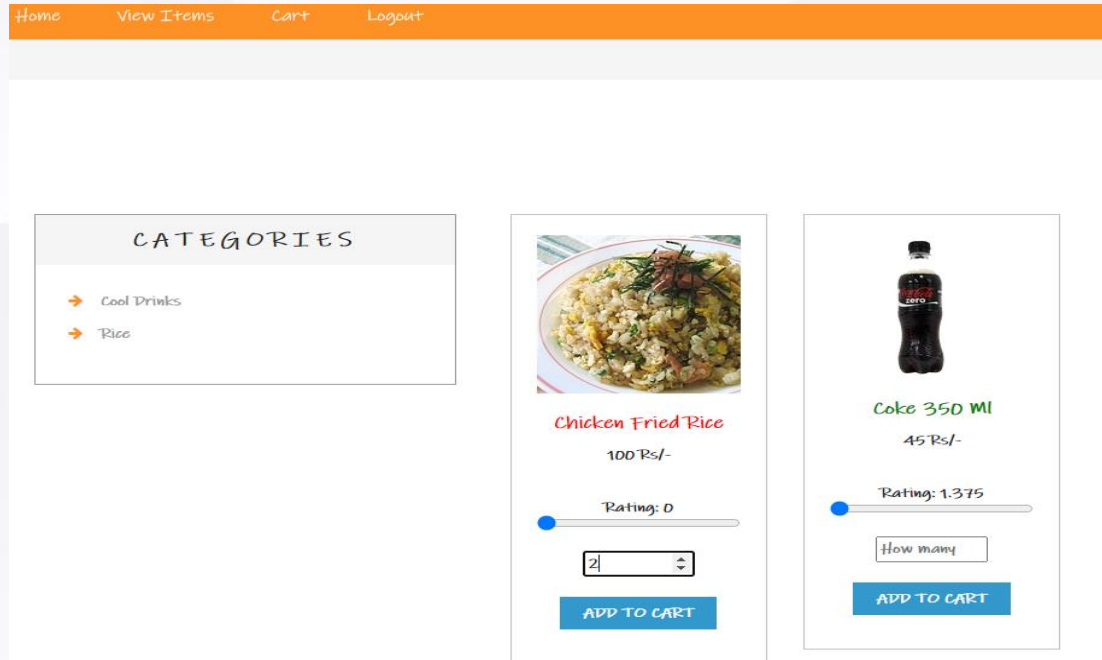
Login

[Home](#) [View Items](#) [Cart](#) [Logout](#)

Welcome Sheeba



# STUDENT SIGN IN MODULE



- Once the students selects the items and clicks on add to cart, an acknowledgement is given.
- If the client wants to add item again, then he can click on view items to go back to check the list of items.

- Under View Items there are Categories, that the Canteen In-charge has the admin rights to add.
- This is an overview of the item available.
- Student can increase or decrease the no. of each Item and then add to cart



Welcome Sheeba

Item Addedd to Cart Successfully..

# STUDENT SIGN IN MODULE

Feedback

Sno	Review	Rating
-----	--------	--------

Submit your review

Tasted so good

Rating: 4

Feedback

View Sentiment

Feedback

Sno	Review	Rating
1	Tasted so good	4
2	Quantity is too less	2

Submit your review

Enter Review

Rating: 3

Feedback

View Sentiment

- Under each item, there is a rating scroller, once clicked it directs you to the page where you can submit your feedback.
- The feedback isn't submitted unless a review is written.
- You can also read the history of reviews on that page.

## Feedback

Sno	Review	Rating
1	Tasted so good	4
2	Quantity is too less	2
3	not bad	3
4	Loved it	5
5	It was way too spicy	1

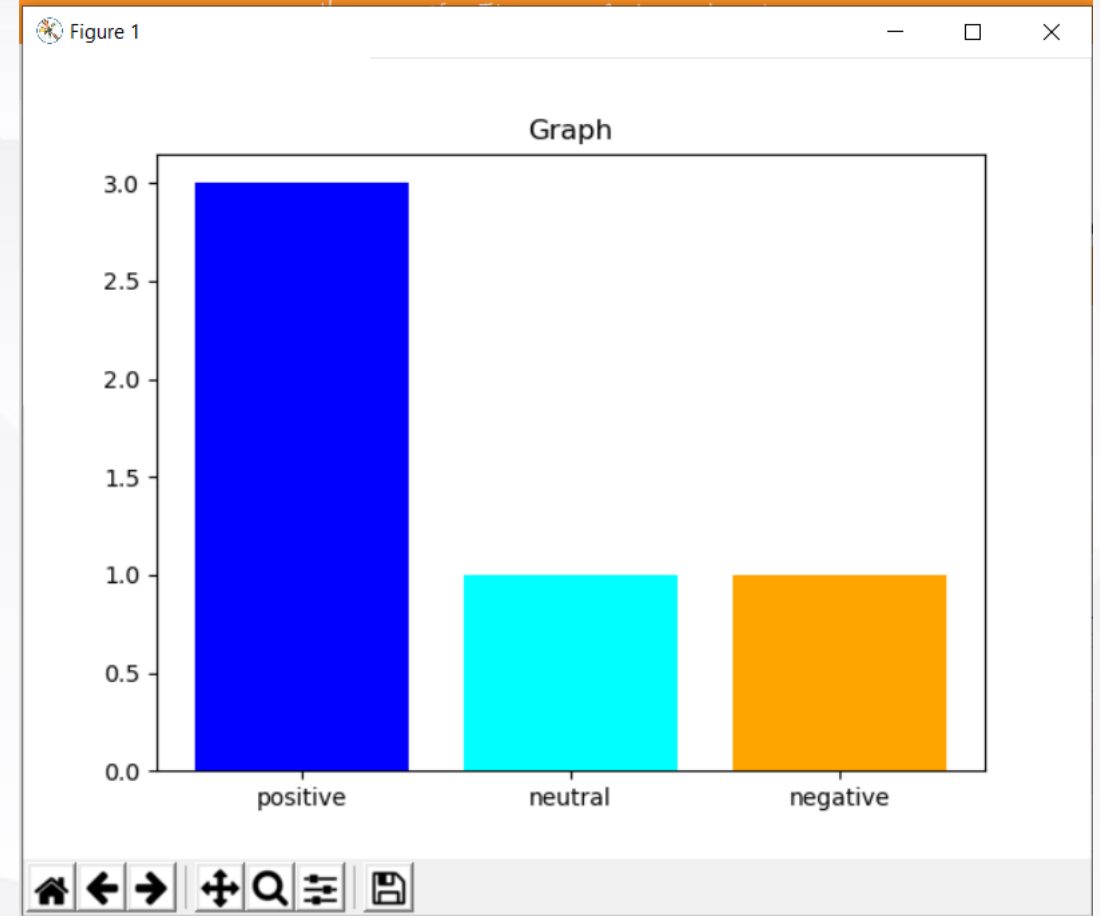
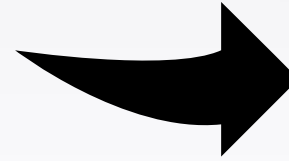
Submit your review

Enter Review

Rating: 3

Feedback

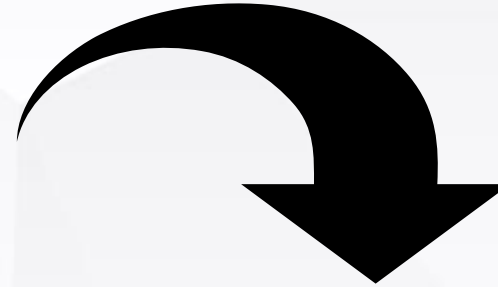
View Sentiment



- After the reviews have been read or submitted, students have a button “View Sentiment”.
- Based on the reviews, analysis is done for the customer to see the items performance graph.
- The graph helps the customer to decide visually if they want to go for the item or no.

SL No.	Product Name	Product Cost	Quantity	Price
1	Chicken Fried Rice	100	2	200
2	Coke 350 ml	45	1	45

Continue to basket	
Chicken Fried Rice	₹200
Coke 350 ml	₹45
Total	₹245
<input type="button" value="Purchase"/>	



- After the customer has done adding items to card, they can click on the Cart button on the menu bar to view their items.
- Once done, the customer needs to click on purchase for confirming the order.
- By doing this an OTP is generated for their order and by that it means that the order has been sent to the Canteen Incharge.
- To collect their order, they need to tell the OTP to the vendor and the food will be served.

Your order completed. Please note the OTP of your order 206720

# CANTEEN INCHARGE

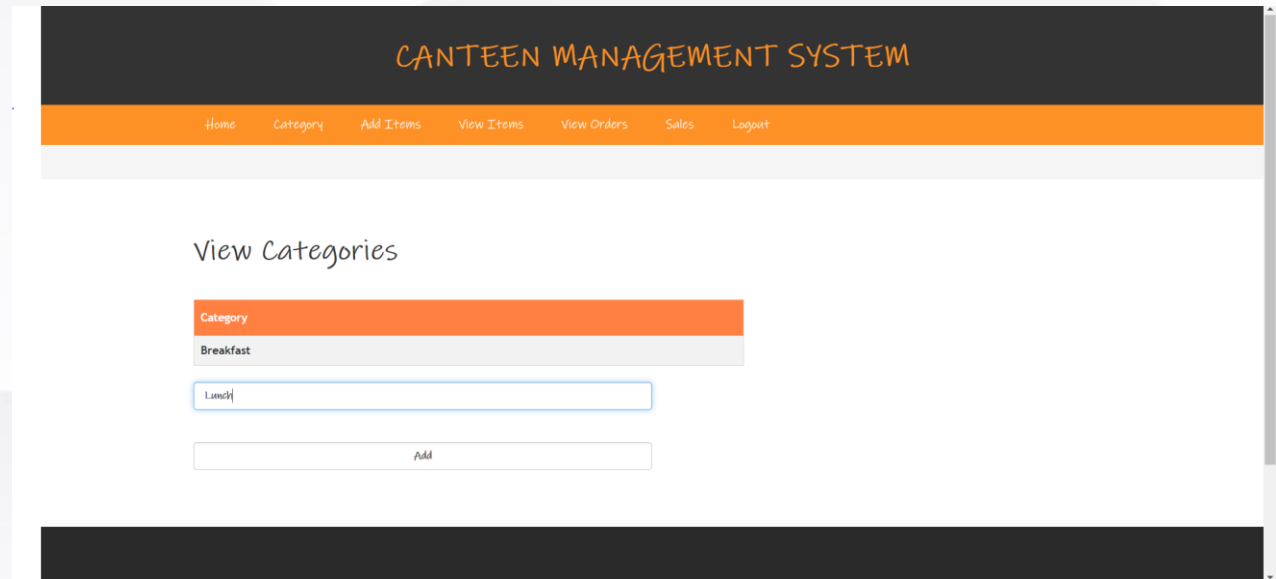
The various functions of of the canteen Incharge are :

- Adding different Category for the food items.
- Adding food items under a specific category along with the price and image.
- View the available food items for each specific category
- Manage the Sales module and perform functions like uploading sales data, Monthly Sales, Monthly Sales prediction and each product Sales.
- View the order placed by the customer on the basis of OTP.
- Can Note the order as soon as the order is completed or served to the customer.



# CANTEEN INCHARGE

- Functions of the canteen In charge
  - Adding different Category for the food items.
- Incharge can add the food items under particular category only and not individually.
- Only after adding the category, the incharge can add particular food item under it.



The screenshot displays the 'Canteen Management System' web application. At the top, a dark grey header contains the title 'CANTEEN MANAGEMENT SYSTEM' in orange. Below this is an orange navigation bar with links: Home, Category, Add Items, View Items, View Orders, Sales, and Logout. The main content area is titled 'View Categories' and features a form with an orange 'Category' label, a 'Breakfast' category selected, a text input field containing 'Lunch', and an 'Add' button.



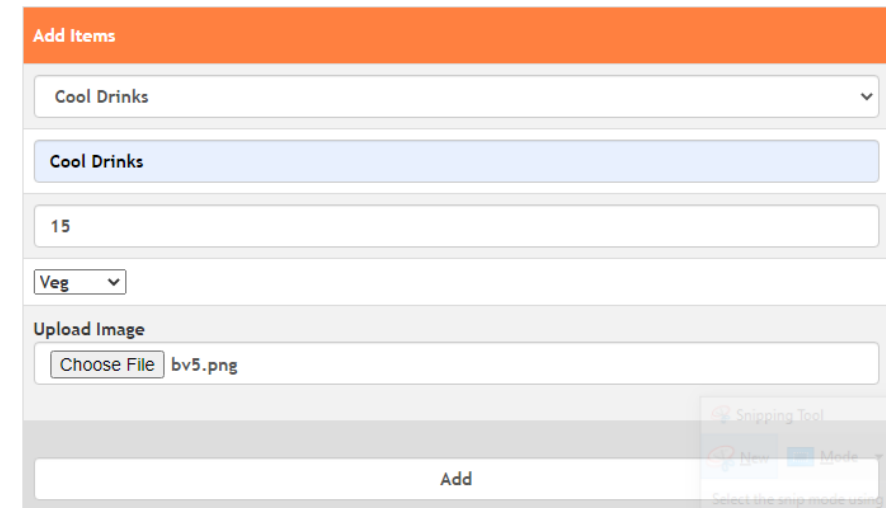


# CANTEEN INCHARGE

Functions of of the Canteen Incharge module

- Once the category is added it will be visible when the incharge visit he add items page.
- In this page Incharge can add items under desired category by filling out the details like price, name, picture and type of food that is veg and Non-veg.

Add Items



The screenshot shows a web form titled 'Add Items' with an orange header. The form contains the following fields and controls:

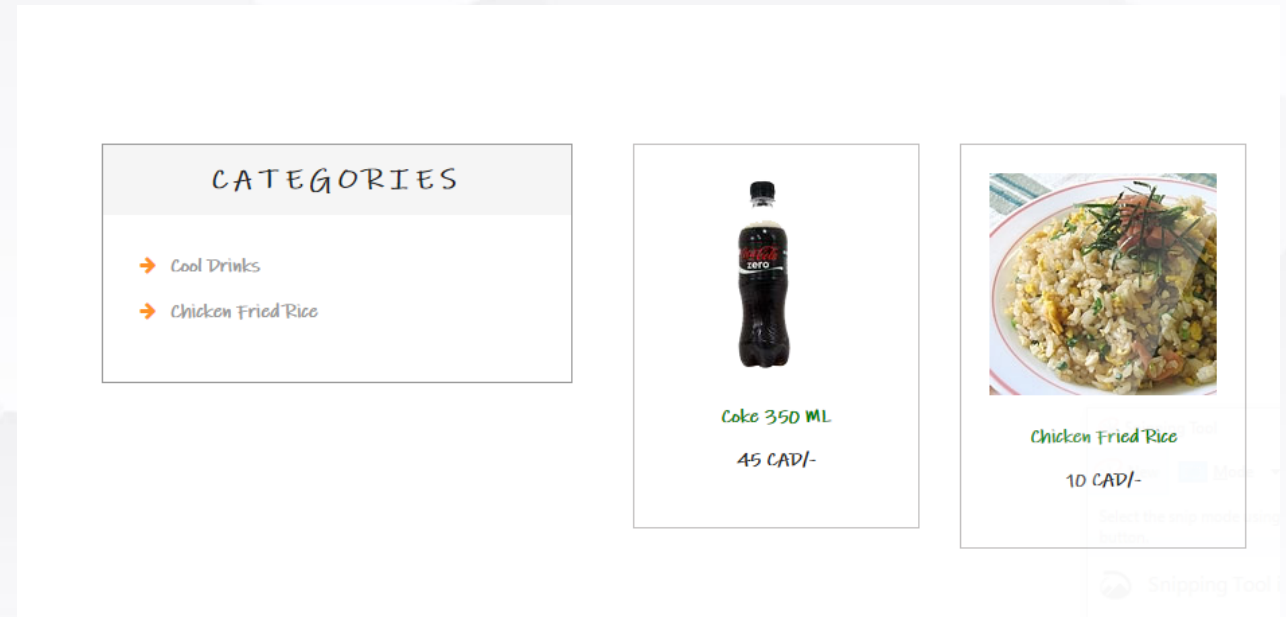
- A dropdown menu with 'Cool Drinks' selected.
- A blue button labeled 'Cool Drinks'.
- A text input field containing the number '15'.
- A dropdown menu with 'Veg' selected.
- An 'Upload Image' section with a 'Choose File' button and the filename 'bv5.png' displayed.
- An 'Add' button at the bottom right of the form.

Snipping Tool  
New Mode  
Select the snip mode using the Mod button.



# CANTEEN INCHARGE

- Functions of the canteen In charge module
- After the items are added under the specific category, then the incharge can view the food items under preferred category



# CANTEEN INCHARGE

- Incharge can view the order placed by the student/guest on the basis of OTP generated during the time when the order is placed.
- Each order is unique and so as the OTP and one customer can have only one order and OTP at a time.
- The recent pending order is automatically visible to the incharge and when clicked on the view button he can see the order details.
- Once noted it is completed or the order is consider as served.

[Home](#) [Category](#) [Add Items](#) [View Items](#) [View Orders](#) [Sales](#) [Logout](#)

SL No.	Product Name	Product Cost	Quantity	Price
1	French Toast	25	2	50

Total Cost : 50

Noted

Enter OTP:

Search

View New Orders

Order OTP: 824666

View



# SALES MODULE

- Forecasting of the future demand in sales is key to the planning and activity of trade and business.
- Sales is considered as a time series and sales forecasting is a major issue owing to the unpredictability of demand which relies upon numerous factors.
- With this feature customer can focus on important KPI for his business.
- This will help in viewing the sales data for an year where he can see data as column wise starting with Year and month of that year and total amount made in that month and Total amount made for that month.



# SALES MODULE

- With this data, canteen admin can understand easily about the sales generated in this month.
- Sales reports help canteen admin to train, motivate and improve the performance of their team meaning the value of doing them well and with precision is and should always be, one of the priorities of their business.
- With this sales module, Canteen admin will be able to upload the monthly sales data to check monthly sales, where he can read, update and delete sales from this module.

## VIEW SALES DATASET

Sno.	Year	Month	Grand Total
1	2017	1	56000
2	2017	2	57600
3	2017	3	59200
4	2017	4	60800
5	2017	5	62400
6	2017	6	64000



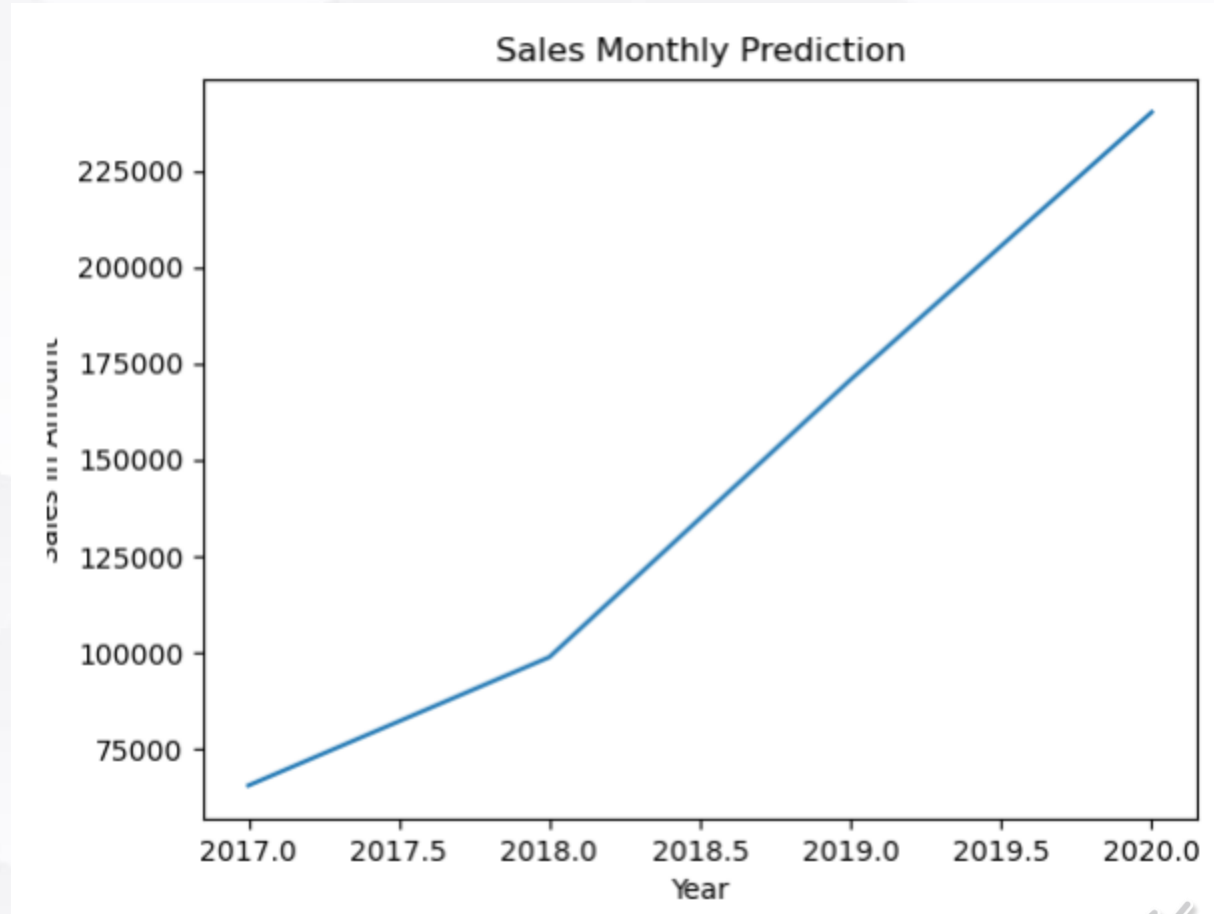
## MONTHLY SALES PREDICTION

Predict



# SALES MODULE

- Various machine learning regression techniques have been used to forecast the sales yearly, in our project we have used Time Series technique.
- In order to calculate the Performance metrics, we have used RMS algorithm Root Mean Square Error Root Mean Square Error (RMSE)
- It is the square root of the mean square error. It is the root of the average of squared differences between prediction and observation. Lower the error implies greater the accuracy of the model.





THANK YOU