

# Smart College

## Hostel Mess Management System to Reduce Wastage of Food



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# What makes a Smart City SMART?

- The term differs across geographies based on the level of developments, change according to reforms.
- Using data and intelligence tools to generate knowledge, information to better manage services delivered to people.





# Smart College : Hostel Mess

Proposed solution:

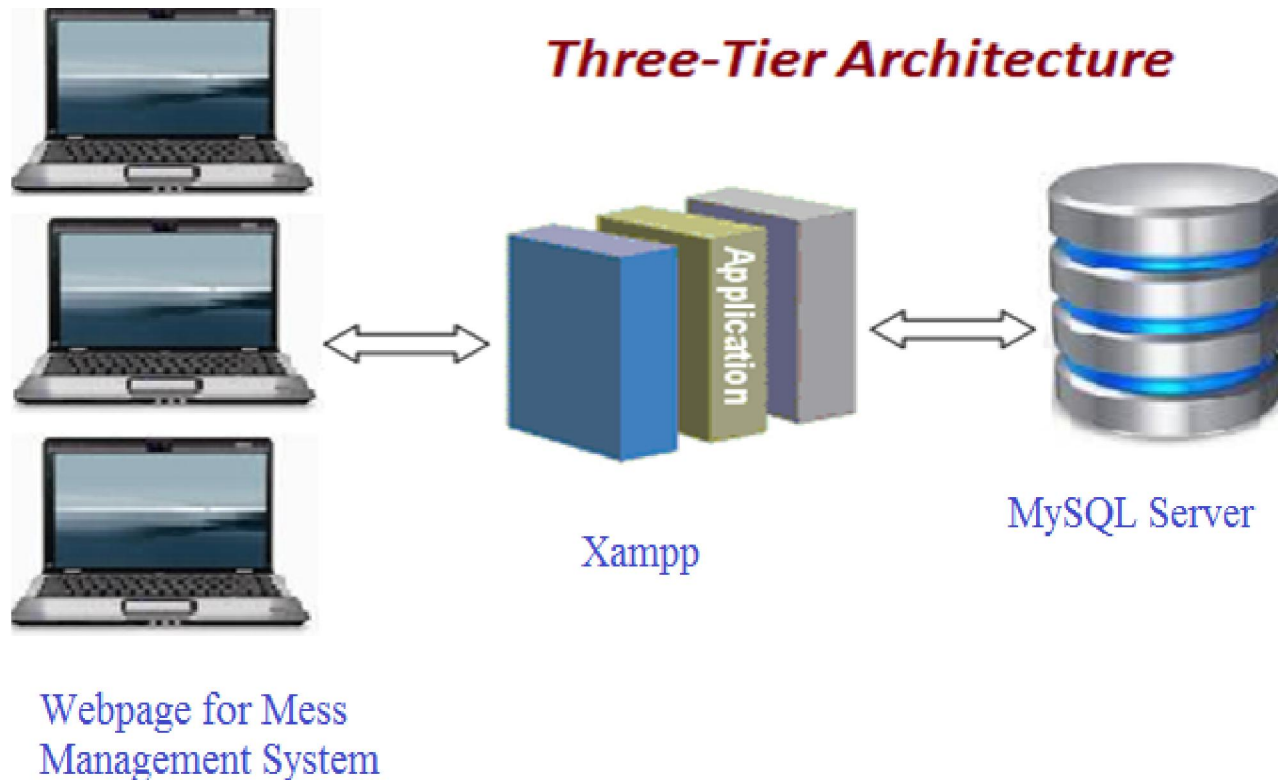
- Each student registers for meals, day before through a student portal.
- Registration by Hid, check boxing lunch/dinner.
- Food is prepared proportional to count received before deadline.
- Mess authority confirms registration in mess at the time of meal by Hid.
- Hence only what is needed is cooked by mess authorities.

# What makes this idea smart?

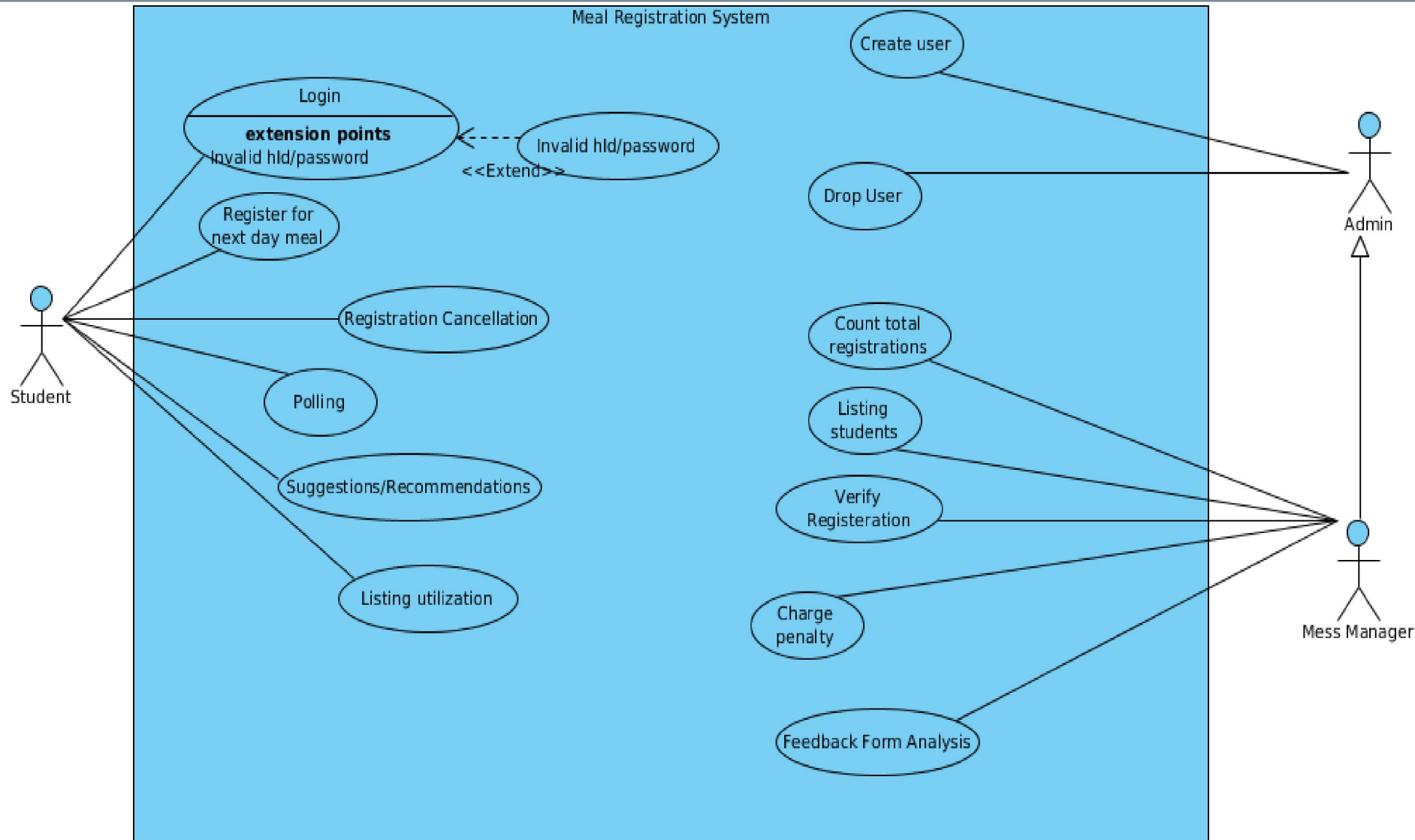
- Stakeholders are invited to participate virtually in decision making.
- Cook only what is needed to avoid wastage.
- Utilization details for every student to check his/her monthly expenditure.
- Provision to donating the residual food to needy/NGO's.
- The scalability of the system which would lead to a larger impact.



# Architectural Design



# Use case diagram of system



# Tools Used

- Visual Paradigm 13
- Xampp
- phpMyAdmin
- MySQL
- HTML 5.0
- CSS 3
- Java Applets
- Eclipse Juno
- Notepad++ 6.3.2



# Implementation details

- Design the database
- Design a prototype of the User Interface for each web page.
- Create the UI on notepad++ in php documents
- Design the database queries and test it on sample data.
- Add database queries and functionalities to the same





# Implementation Screenshot- 1

## **Mess Management System**

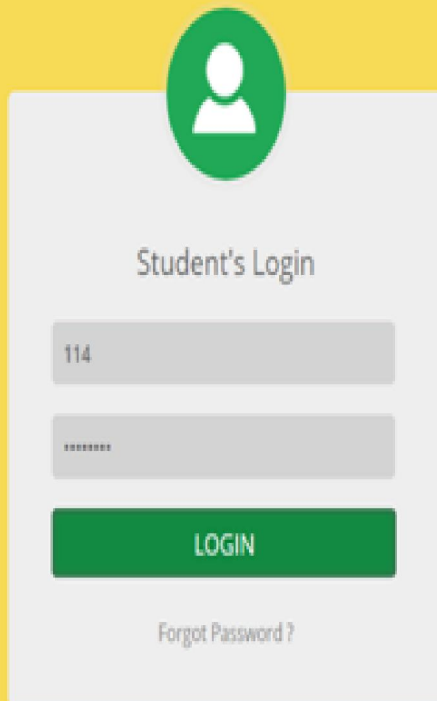
**Login as Student**

Student's Login

**Login as an Administrator**

Administrator's Login

# Implementation Screenshot-2



A login form for students. It features a green circular icon with a white person silhouette at the top. Below the icon is the title "Student's Login". There are two input fields: the first contains the number "114" and the second contains a series of dots representing a password. Below the input fields is a green button with the text "LOGIN". At the bottom, there is a link that says "Forgot Password ?".

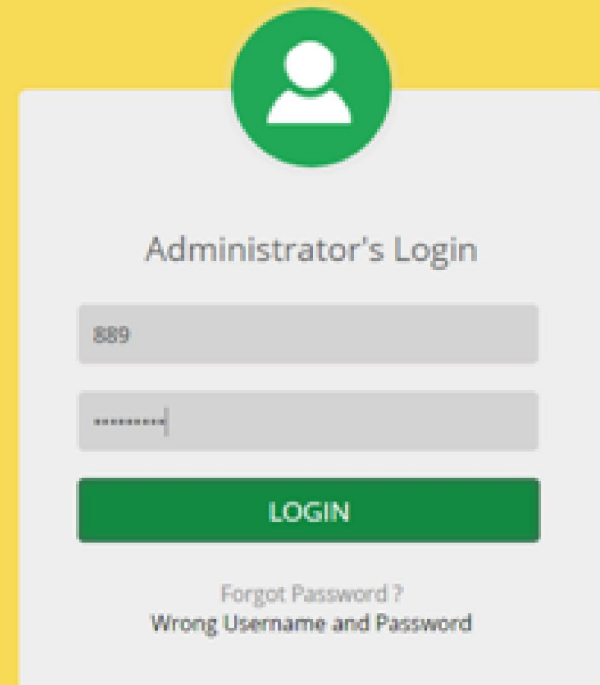
Student's Login

114

.....

LOGIN

[Forgot Password ?](#)



A login form for administrators. It features a green circular icon with a white person silhouette at the top. Below the icon is the title "Administrator's Login". There are two input fields: the first contains the number "889" and the second contains a series of dots representing a password. Below the input fields is a green button with the text "LOGIN". At the bottom, there are two links: "Forgot Password ?" and "Wrong Username and Password".

Administrator's Login

889

.....

LOGIN

[Forgot Password ?](#)

[Wrong Username and Password](#)

# Implementation Screenshot-3



The screenshot shows a web application with an orange background. At the top center, the text "Meal Registration Form" is displayed in a large, bold, black serif font. Below this, the form contains the following elements:

- A label "Name:" followed by the text "Simran Jaggi".
- A label "hId:" followed by a text input field containing the value "114".
- A label "date:" followed by a text input field containing the value "2016-04-12".
- A label "lunch:" followed by a checked radio button.
- A label "dinner:" followed by an unchecked radio button.
- A "submit" button located below the "dinner:" label.

In the top right corner, a white dialog box with a thin border is open. It has a close button (an 'X' icon) in the top right corner. The text inside the dialog reads:

localhost says:  
Your Registration successful with Hostel ID:114

At the bottom right of the dialog box is an "OK" button.

# Implementation Screenshot-4

The screenshot displays the 'Administrator's Page' with an orange background. A modal dialog box is open, titled 'localhost says:', containing the message 'The student has registered' and an 'OK' button. On the page, there is a text input field labeled 'Id:' containing the value '100'. Below this are two radio buttons: 'Lunch' (unselected) and 'Dinner' (selected). A 'Verify' button is positioned below the radio buttons. Further down, the text 'Lunch: 6' and 'Dinner: 5' is displayed. At the bottom of the page, there are two buttons: 'New registration' and 'Logout'.

**Administrator's Page**

Id: 100

☐ Lunch

☒ Dinner

Verify

Lunch: 6

Dinner: 5

New registration

Logout

localhost says:

The student has registered

OK

# Implementation Screenshot-5

## Student Registration Form

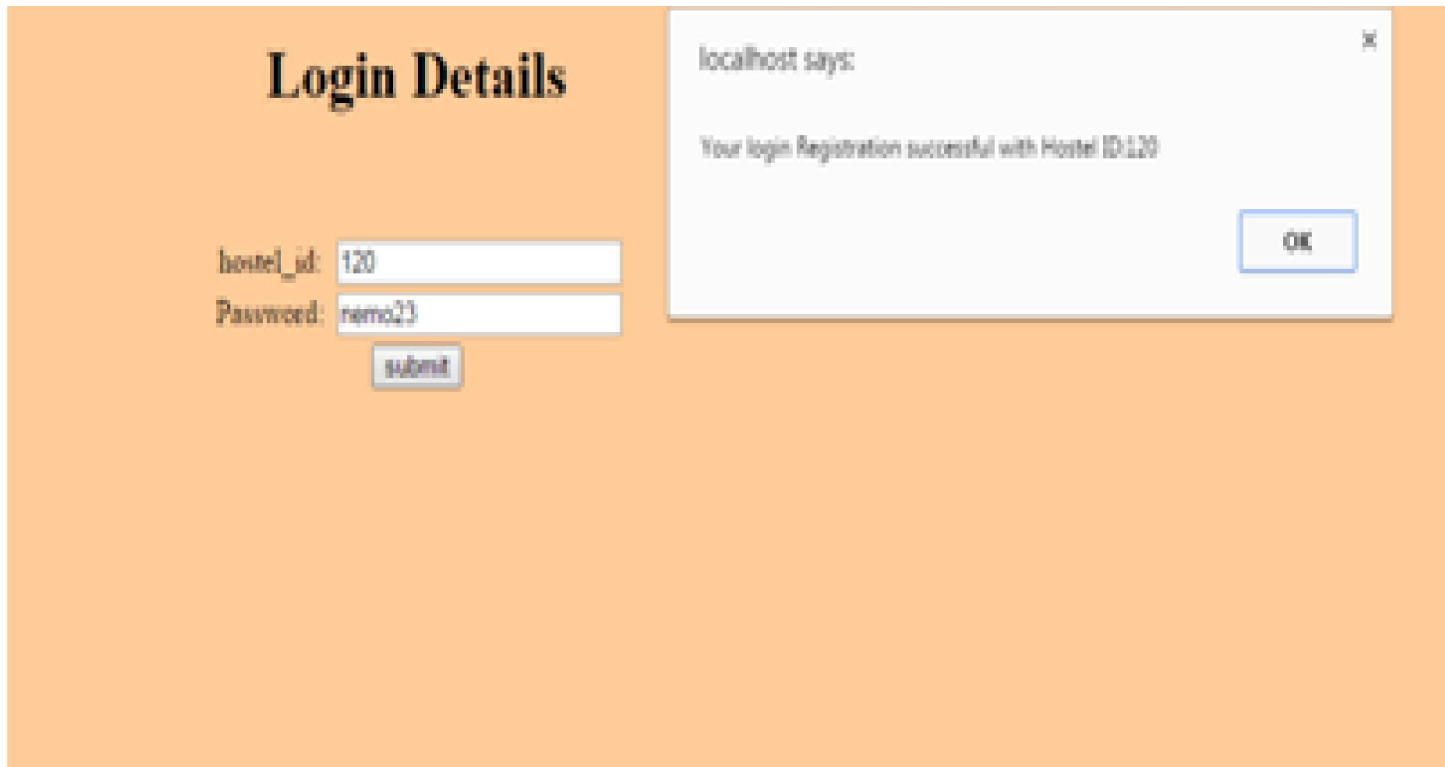
hId:	<input type="text" value="120"/>
Name:	<input type="text" value="anisha salunkhe"/>
Phone No:	<input type="text" value="8975480758"/>
Room No:	<input type="text" value="306"/>
Email:	<input type="text" value="ani.sha@gmail.com"/>
	<input type="button" value="submit"/>

localhost says:

Your Registration successful with Hostel ID:120

OK

# Implementation Screenshot-6



The screenshot displays a web application interface with an orange background. On the left, a section titled "Login Details" contains two input fields: "hostel\_id" with the value "120" and "Password" with the value "nemo23". Below these fields is a "submit" button. On the right, a white dialog box with a close button (X) in the top right corner displays the message "localhost says: Your login Registration successful with Hostel ID:120". An "OK" button is located at the bottom right of the dialog box.

**Login Details**

hostel\_id: 120

Password: nemo23

submit

localhost says: X

Your login Registration successful with Hostel ID:120

OK

# Case study- Baya Karve Hostel Complex

- On one-time basis in Hostel no-3 where 300 girls are assumed to have a meal (food cooked for 300).
  - On an average one-time only 150-170 girls have their meal and rest food is wasted.
  - Purchased Rice = 15Kg
  - Purchased Flour=12Kg
  - Purchased Vegetables=30Kg(3 Kg wasted for making it ready to cook)
  - On an average for one-time:
    - Wasted cooked but unused food=5Kg
    - Residual food collected from thalis =5/6 Kgs
- Therefore in a day twice the amount of food is wasted in accordance to above statistics.



# Future Scope

- ❑ In large hostel complexes , provision to send food to a biogas treatment plant or NGO depending on amount and usage .
- ❑ The system can be extended to integrate with a paypal account for payment of each registered meal.
- ❑ Polling for deciding menu and feedback with analysis can be added to increase student participation.
- ❑ Integrating meal registrations with SMS/ whatsapp text parsing.
- ❑ The hId can be integrated with I-card barcode system for identification and verification.



# Conclusion



- Based on the case study, we estimated that the system can reduce the food wastage to a considerable extent.
- This system when scaled to multiple places will thereby increase the overall impact, thus supporting the Smart City concept.

# References

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## PHP Tutorials

- [www.homeandlearn.co.uk](http://www.homeandlearn.co.uk)
- [www.stackoverflow.com](http://www.stackoverflow.com)
- [www.youtube.com](http://www.youtube.com)
- [www.tutorialspoint.com](http://www.tutorialspoint.com)
- [www.w3schools.com](http://www.w3schools.com)
- [www.smartcity.gov.in](http://www.smartcity.gov.in)



**THANK YOU!!**

