

#### What's VEXT9 PASSION Coff NEVER FAILS! "WORK" focus on 11:00 TALK. LESS DON'T FORGE forget to update system with design team Table POSITIVE THINKING NEX WHAT IEW To do list DAILY DEA REPORTI Kevenue NTERN DON'T BE VDO LATE CONFERENCE 70%

## DESIGN THINKING APPROACH TO HOSTEL MESS CHALLENGES

- Empathize  $\rightarrow$  Define  $\rightarrow$  Ideate  $\rightarrow$  **Prototype**  $\rightarrow$  Test
- Focus: Information Management System for Dynamic Mess Menu

## EMPATHIZE -UNDERSTANDING USER PAIN POINTS



#### **Key Insights from Our Survey:**

- Students frustrated with water wastage and spillage
- Hygiene concerns affecting meal experience
- Diverse taste preferences not accommodated
- Long queues and payment confusion
- Food wastage due to poor demand estimation

#### **User Emotions:**

- Dissatisfaction with current mess system
- Desire for personalization and choice
- Need for transparency and efficiency

### **DEFINE - PROBLEM STATEMENT**

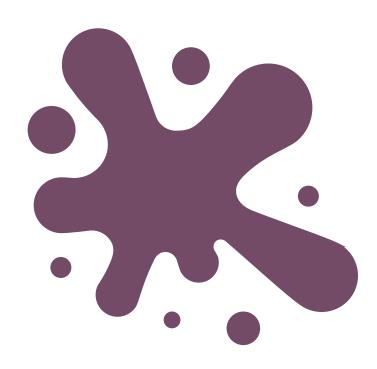
**Core Challenge:** "How might we create a responsive mess management system that accommodates diverse student preferences while optimizing resource utilization and improving overall mess experience?"

#### Three Critical Problems Identified:

- 1. Water Management Unregulated taps causing spillage
- 2. **Hygiene Issues** Poor lighting and cleanliness standards
- **3. Menu & Time Inflexibility** One-size-fits-all approach, fails diverse tastes



### IDEATE - SOLUTION BRAINSTORMING



Problem 1: Water Spillage Solutions

• Low Budget: Water-saving nozzles

• Mid Budget: Push-tap mechanisms

• **High Budget:** Automatic sensor taps

# PROBLEM 2 SOLUTIONS: HYGIENE ENHANCEMENT



Bright white LED lighting installation



Regular cleaning protocols



Pest control measures

# PROBLEM 3 SOLUTIONS, PART I: TAKEAWAY SYSTEMS FOR BREAKFAST & LUNCH







PRE-PACKAGED OPTIONS
TO ELIMINATE MORNING
RUSH



LUNCH TAKEAWAY
OPTION FOR BUSY
STUDENTS

# PROBLEM 3 SOLUTIONS, PART II: DYNAMIC MENU MANAGEMENT

- **Digital Solution:** Mess Management App
- Pre-order system with preference selection
- Weekly billing for special items



# PROTOTYPE FOCUS - MESS MANAGEMENT APP





Optimizes resource utilization



Scalable to other hostel messes



Creates transparent communication

# PROTOTYPE – NIT W MESS MANAGEMENT SYESTEM

#### **Core Features to Prototype:**

- **Pre-booking System** with advance payment
- OTP-based Verification for meal collection
- Time Slot Management to reduce queues
- **Real-time Inventory** tracking for kitchen staff
- Live Demo Available:

https://pritam8abstract.github.io/nit-mess-system/



### PROTOTYPE -SYSTEM ARCHITECTURE



**Student Interface** 

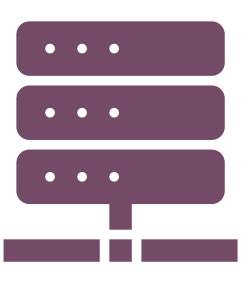
Preference selection
Order tracking
Billing history



Administrative Panel

Usage analytics
Resource
optimization
Financial tracking

## PROTOTYPE -SYSTEM ARCHITECTURE



#### **Student Portal** (\*.student.nitw.ac.in authentication)

- Daily meal menu viewing
- Non-veg advance booking with payment
- OTP generation for meal collection
- Time slot advance alertness (12:00-2:30 PM)

#### Manager Dashboard (@nitw.ac.in authentication)

- OTP verification system
- Student payment status checking
- Daily demand analytics
- Inventory planning tools

#### **Takeaway System Integration**

- Breakfast package pre-ordering
- Lunch takeaway options



### **EXPECTED OUTCOMES**

#### **Resource Optimization:**

- **Reduced food wastage** through accurate demand prediction
- Better inventory management
- **Cost savings** for mess operations

#### **User Experience Enhancement:**

- 100% Meal Availability for paid bookings
- Convenient Breakfast takeaway options
- Transparent payment and booking system

#### **Scalability Potential:**

- Data-driven insights for menu planning
- Community feedback integration



# THANK YOU,

Any Questions?