
Two Cube
IS480 Acceptance
BIG HERO 6

Our Team

Deborah Sim
Project Manager & Scrum Master

Vera Low
Robotics Hardware Lead & Developer Deputy

Sebastian Choo
Business Analyst Lead & Quality Assurance

Jack New
Developer Lead & Robotics Hardware Deputy

Ahmad Saifullah
Front-End & UI/UX Developer

Abdul Haqqim
Developer Lead & Business Analyst Deputy

Stakeholders

Tan Hwee Xian
Supervisor
Senior Research Scientist

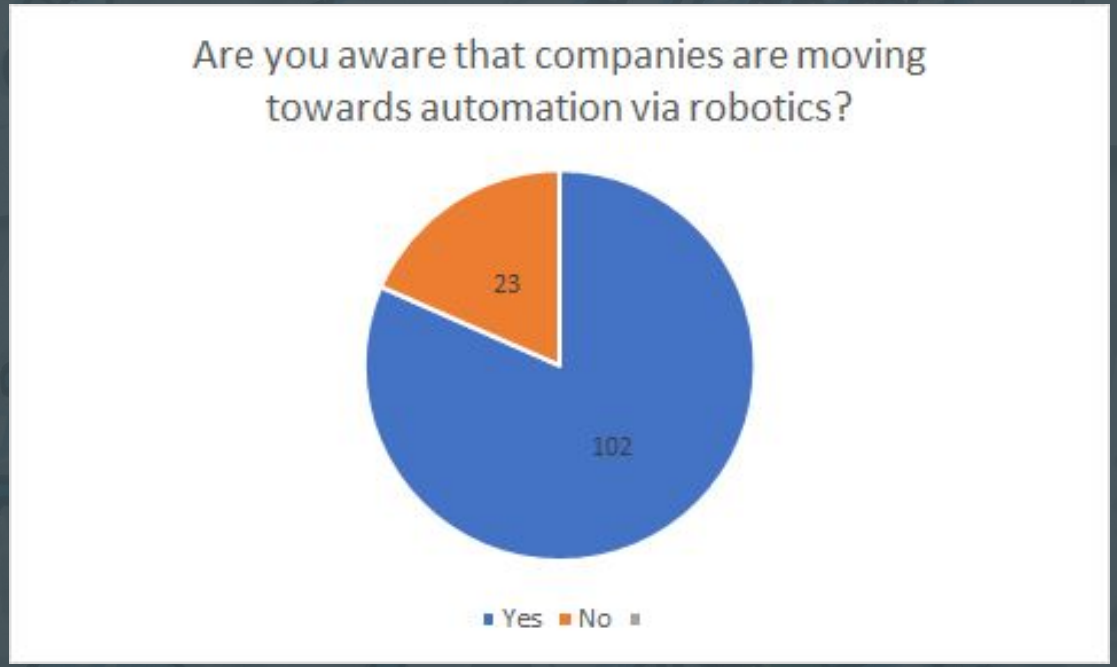
Ben Li
Sponsor
Founder of RoboStudio

Trends

- Companies starting to move towards automation & robotics

- People want to learn coding but face challenges

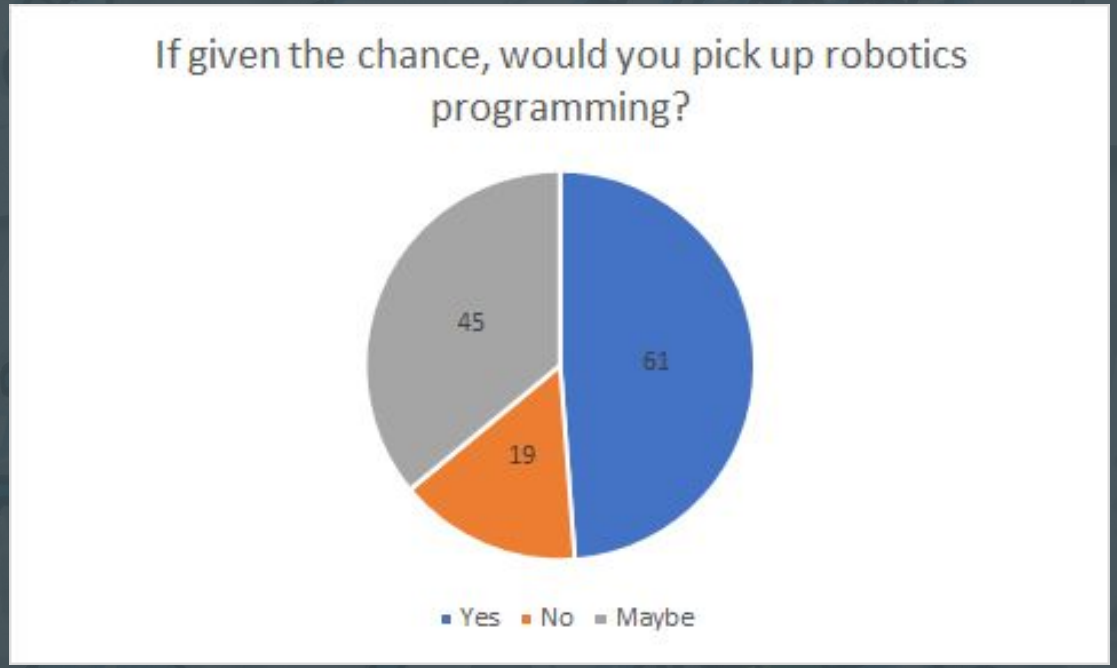
Statistics



Sample Size : 125

Yes : 81.6%
No : 18.4%

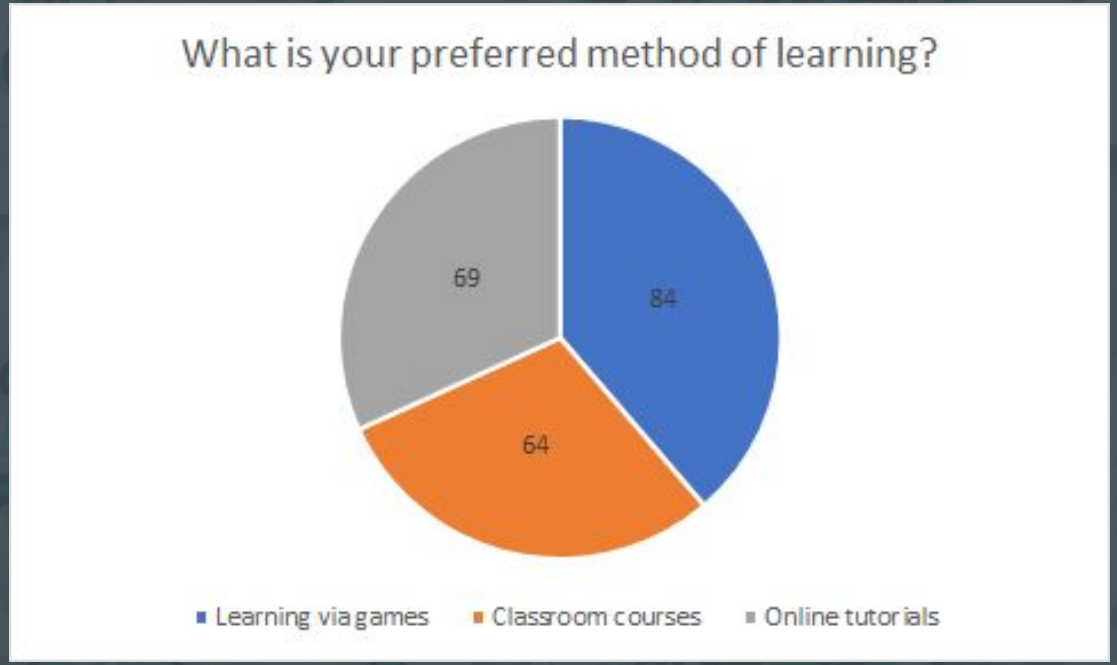
Statistics



Sample Size : 125

Interested : 84.8%
Not Interested : 15.2%

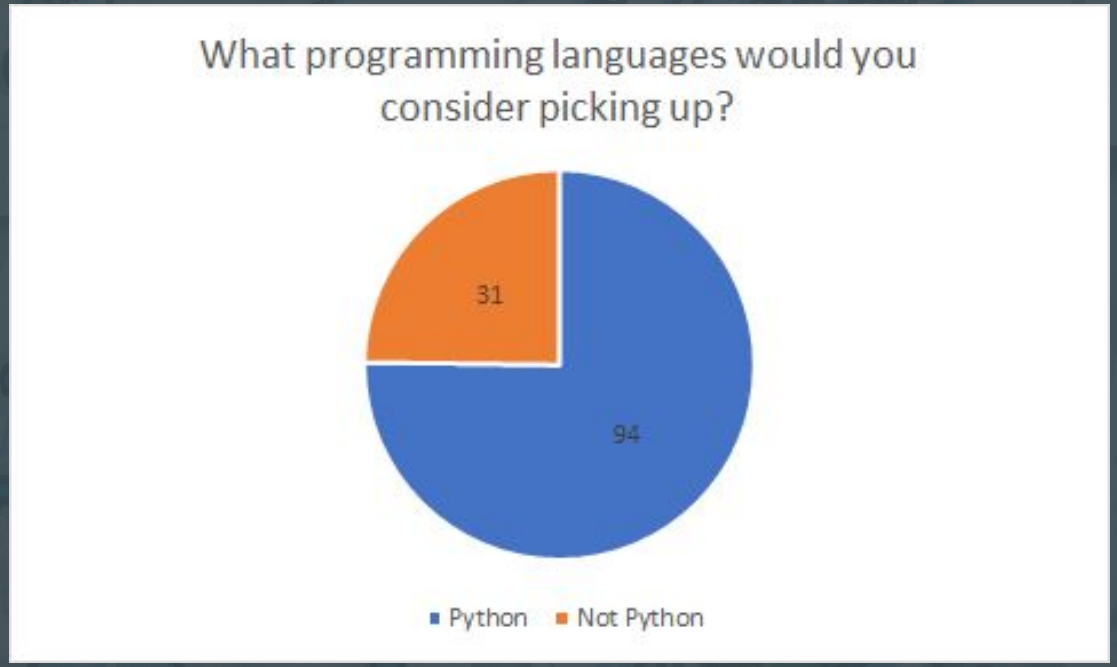
Statistics



Sample Size : 125

Learning via games : 67.2%
Online tutorials : 55.2%
Classroom courses : 51.2%

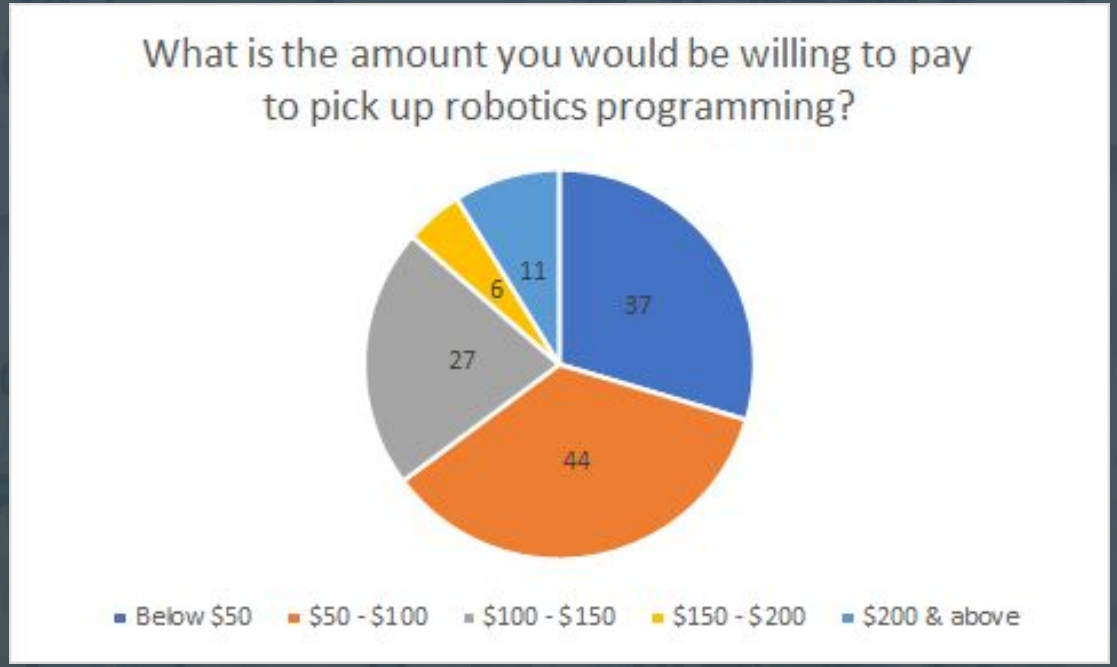
Statistics



Sample Size : 125

Python : 75%
Non-Python : 25%

Statistics

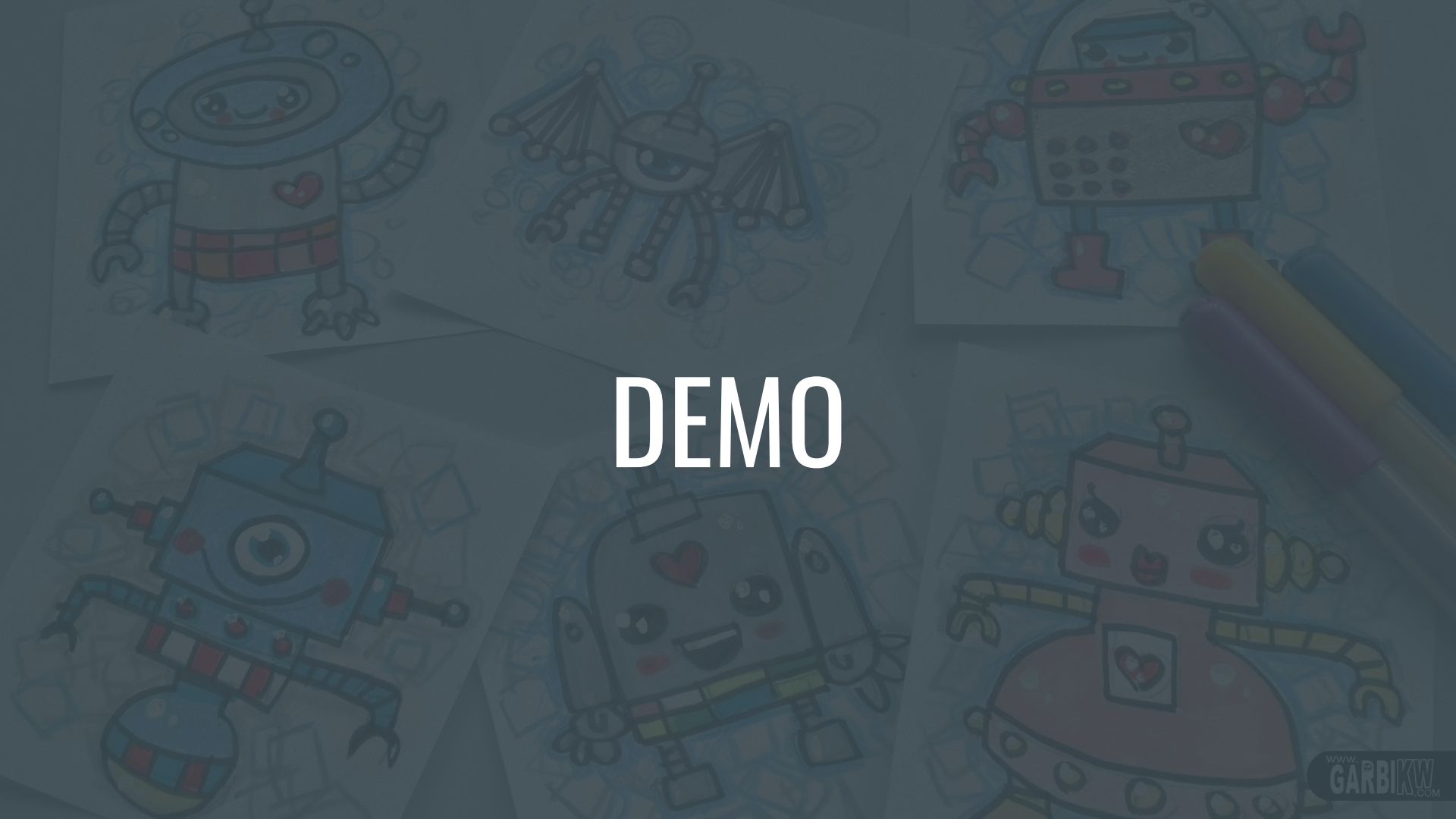


Sample Size : 125

Below $200 : 91.2%
$200 & above : 8.8%

Problem

- Intimidation and hassle of Robotics programming learning
  - Hardware and Software Costs
  - Do not know how to start


DEMO

Solution

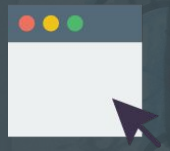
RoboStudio

- An online web platform that aims to promote Python learning with Robotics

- A physical robot is not needed on the user's end

- Remove the hassle of setting up the robot and connectivity issues

RoboStudio



- RoboStudio aims to make learning a fun and interactive experience for the users through the gamification approach

- Users control the movement of the robots to accomplish that goal

- Integrates a code editor for the users which guides them on what code to enter

- Users monitors the movements of robots via a live camera

Competitive Advantage

- Learning via gamification and robotics as a learning tool

- Shared economy

Scope

CORE FUNTIONALITIES

Account Module
- Login/Logout
- User Registration
- Profile Management

Learner Module
- Book Game

Finance Module
- Payment

Administrator Module
- Add/Delete Game

Robotics Module
- Remote Control
- Live Streaming

SECONDARY FUNTIONALITIES

Game Provider Module
- Add/Delete Game
- Rate Game

Learner Module
- Rate Game
- Search Game
- Book Additional Session

Analytics Module
- Learner Proficiency

Shopping Module
- Purchase of Robot Kits

GOOD-TO-HAVE

Finance Module
- Wallet
- Cash out
- Player Donation

Robotics Module
- Robot Management System

Administrator Module
- Recording of Live Display
- Robot Stock/Status Check

Comms Module
- Chat Bot

Learner Module
- Multiplayer Game Room

Core Functionalities

Account Module

- Login/Logout
- User Registration
- Profile Management

Learner Module

- Book Game

Administrative Module

- Add/Delete Game

Robotics Module

- Remote Control
- Live Streaming

Finance Module

- Payment

Secondary Functionalities

Game Provider Module

- Add/Delete Game
- Rate Game

Learner Module

- Rate Game
- Search Game
- Book Additional Session

Analytics Module

- Learner Proficiency

Shopping Module

- Purchase of Robot Kits

Completed Functionalities

Account Module

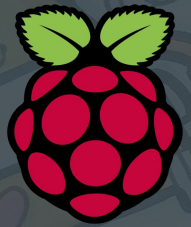
- Login/Logout
- User Registration
- Profile Management

Robotics Module

- Remote Control

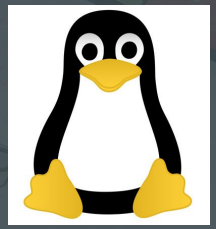
Technologies

Python



Raspberry Pi

Wordpress



Linux

Windows

Putty

DEXTER INDUSTRIES

peepso

User Acceptance Test (UAT) 1

Venue: SMU SIS GSR 2-2

Date: 03 November 2017

Time: 12:30PM

Duration: About 15 minutes per user

Number of Participants: 4

Age Group: 18 to 24

Roles Involved: Learner

Scope: Account Module

User Acceptance Test (UAT) 1

Objectives:

To look at the feedback with regards to our User Interface

Test Goals	
Users should be able to create an account and receive an activation email upon successful creation.	Goals Reached. All participants were able to complete the task.
Users should be able to login successfully with their username and passwords.	Goals Reached. Some participants took some time in finding the button to log in on the site.
Users should be able to update their personal account information.	Goals Reached. All participants were able to complete the task.

User Acceptance Test (UAT) 1

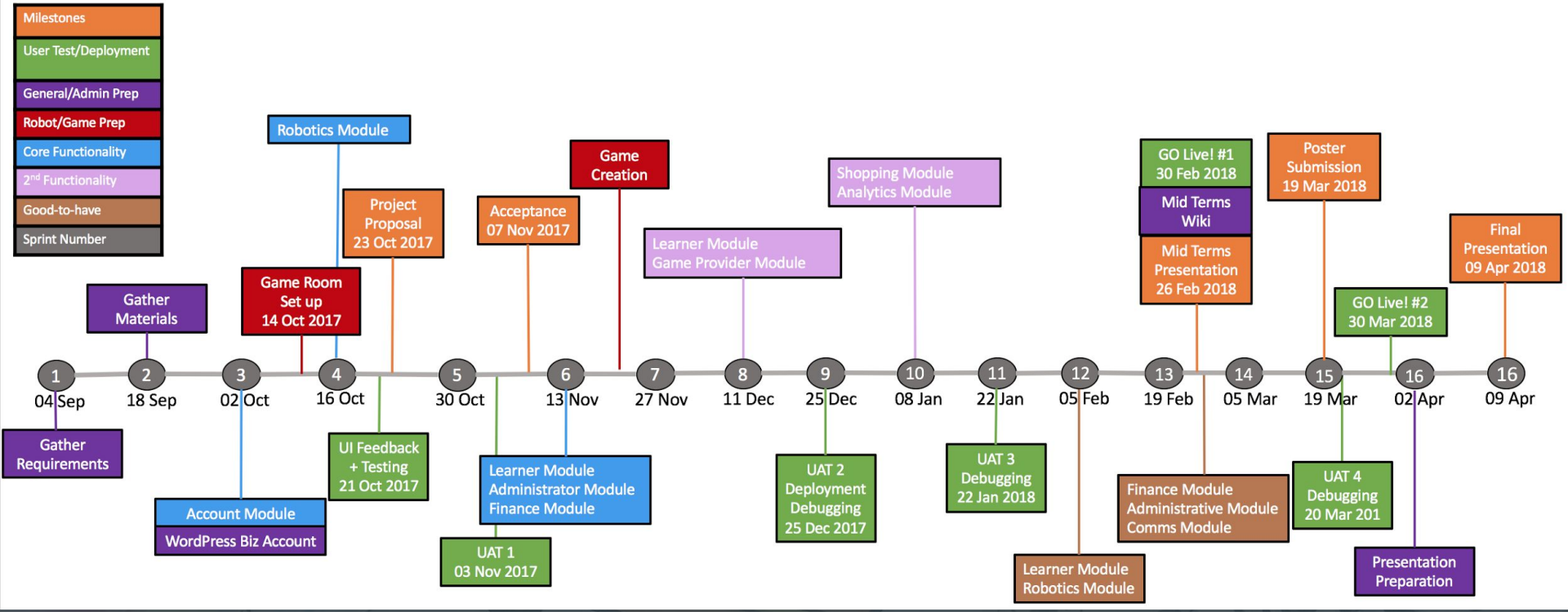
Key Findings:

No.	User Comments	Changes
1	Difficulty in finding the login button.	Added the login button at the top navigation bar beside the registration button.
2	Update profile should have more coding related information	Added in more questions with regards to technical proficiency.

Project Management

- An agile approach to deliver integrated, tested and business-valuable features in each sprint fast
- Sprints with a fixed duration of 2-weeks

Project Management



Risk Management

Risk Type	Risk Event	Mitigation
Technical Risk	Team is not proficient in the technology used (Raspberry Pi, Python)	Team to research on technology and experience it to gain proficiency
Resource Risk	Unexpected Hardware issues	Team to keep testing hardware functionalities to ensure that hardware is in good condition. Team to also have spare parts for hardware in case of any hardware breakdown
Resource Risk	Scalability in hardware procurement	Sponsor to help the team source the robotics supplier

Challenges

- Team is unfamiliar with working with robotics hardware
- Malfunction of the robot/robotics parts which requires replacement
- There may be many changes in the platform requirements as our project proceeds
- Delaying of Project due to inaccurate time estimation on functionalities and unfamiliarity with robotics hardware

Improvements

- Took the time to familiarise ourselves with the robot hardware
- Bought spare parts for the robot should there be a need for replacement and reduce down time

- Learn from previous iteration and ensure that project can be better managed

X Factor

- Aim to produce a full-fledged web application that will be used by at least 50 users islandwide
- Achieve 10 bookings within the first month of launch

Learning Outcome

- Importance of Project Management
  - Anticipate risks and be adaptable to change
- Managing of expectations is crucial
- Translating a business idea into technical deliverables


Thank You!