WannaBe

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Malavade Sanskar Deepak	Lead Developer	U2023184A
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Dhanyamraju Harsh Rao	Backend Developer	U2023045C


PRESCHOOL GO WH
find the perfect Pre schoo

PRESCHOOL GO WHERE

Find the perfect Pre school for your child

PRESCHOOL GO WHERE

Find the perfect Pre school for y

01
Product Introduction

02
Design for Maintainability

03
Software Quality Assurance

04
Project Management

05
Risk Management

06
Release Management

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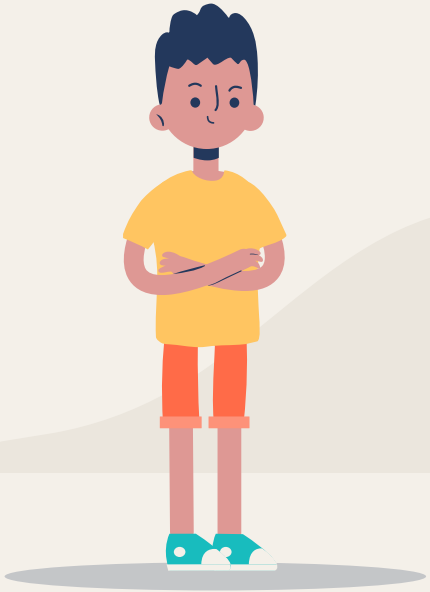
Find the perfect Pre school for y



01

Product Introduction

Problem and Solution

PRESCHOOL GO WHERE

Find the perfect Pre school for y

1900 +

No of PreSchools in Singapore

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What do parents consider ?

Distance

The closer to one's home or workplace the better

Fee

Prices vary extensively depending on age, citizenship status, school etc

Second Language

PreSchools in Singapore offer more than 12 different languages

Dietary Preferences

Ensuring children can have good in accordance with their cultural, religious and health requirements

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How do you choose the right PreSchool ?

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PreSchool Go Where

Web Application

Can be used on mobile, tablet and laptop

Filter Preschools

Find the right preschool based on all your requirements

Export Results

Shortlisted list of preschools is emailed to the customer

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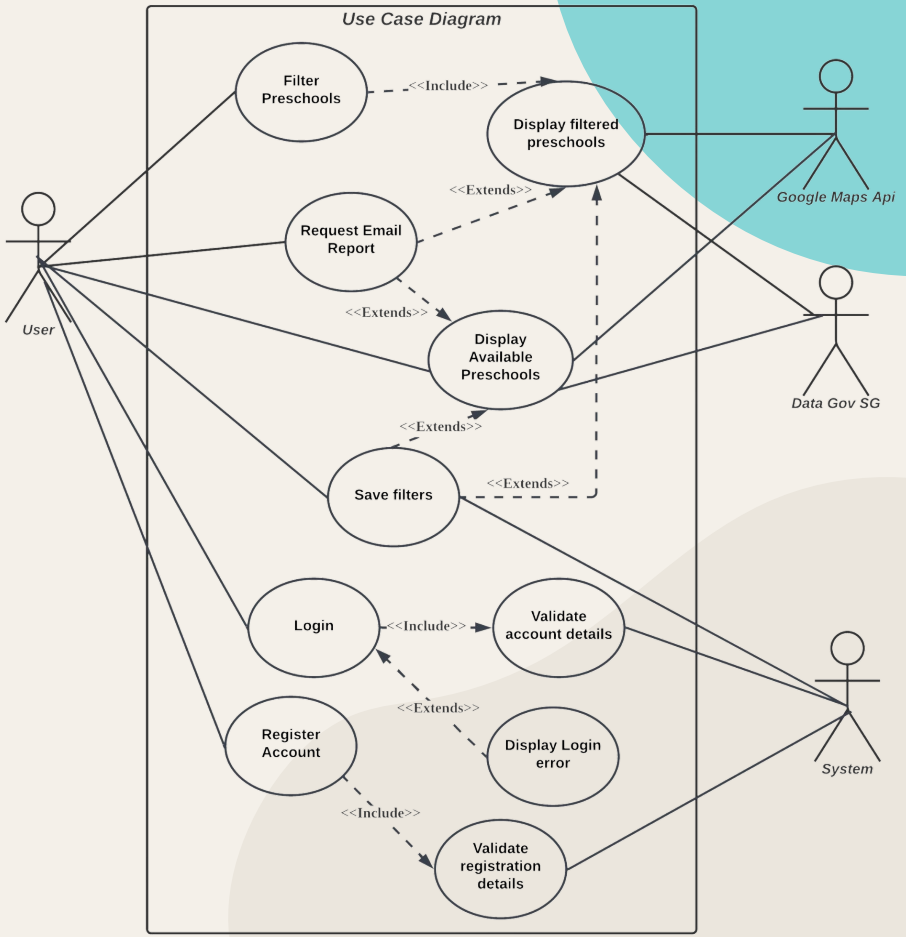
Use Case Diagram

1. **Filter Preschools** - A highly customizable filter bar that offers a plethora of filter options
2. **Display Preschools** - Showcases both available or filtered preschools on a Google Maps display
3. **Request Report** - Sends a detailed email report on a particular preschool upon the user's request
4. **Save Filters** - provides convenience by offering users with option to save their current filter inputs so that they can use them anytime



02

Design for Maintainability

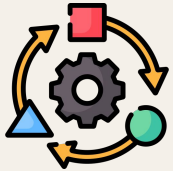
Adaptable, Reusable & Readable

Importance of Maintainability

Adding functionalities made easy

Saves Time and reduces maintenance cost

Adaptive and Flexible



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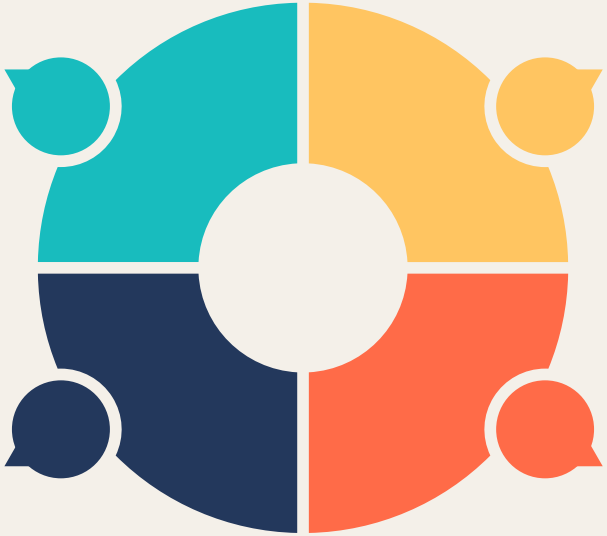
Technology Stack

React Js
Frontend Development



Node JS
Express framework for Backend Development

Firebase
Hosting service for our web application

Supabase
Store user related data and preschool data

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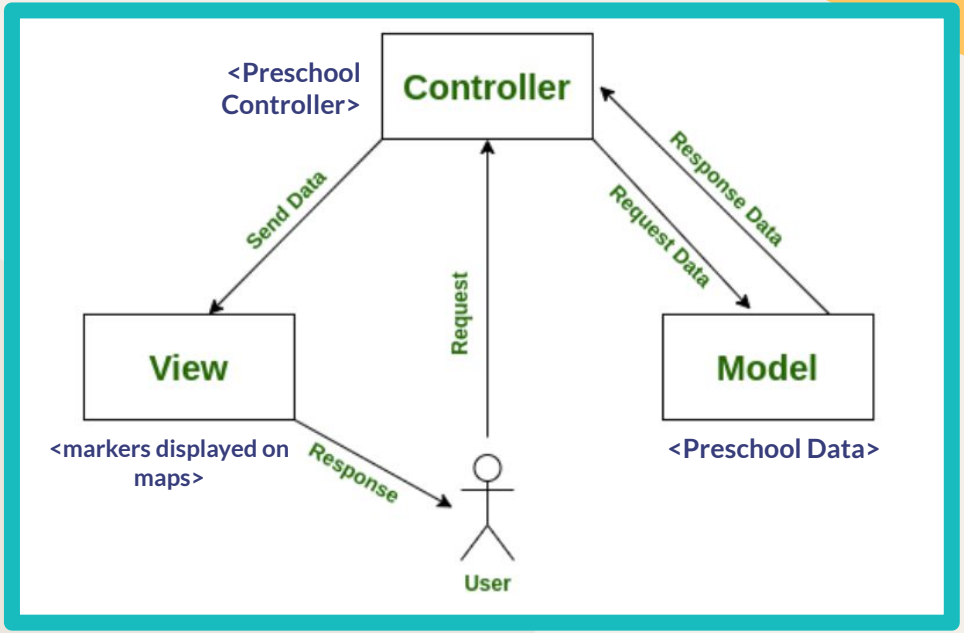
MVC Design Pattern



03

Software Quality Assurance

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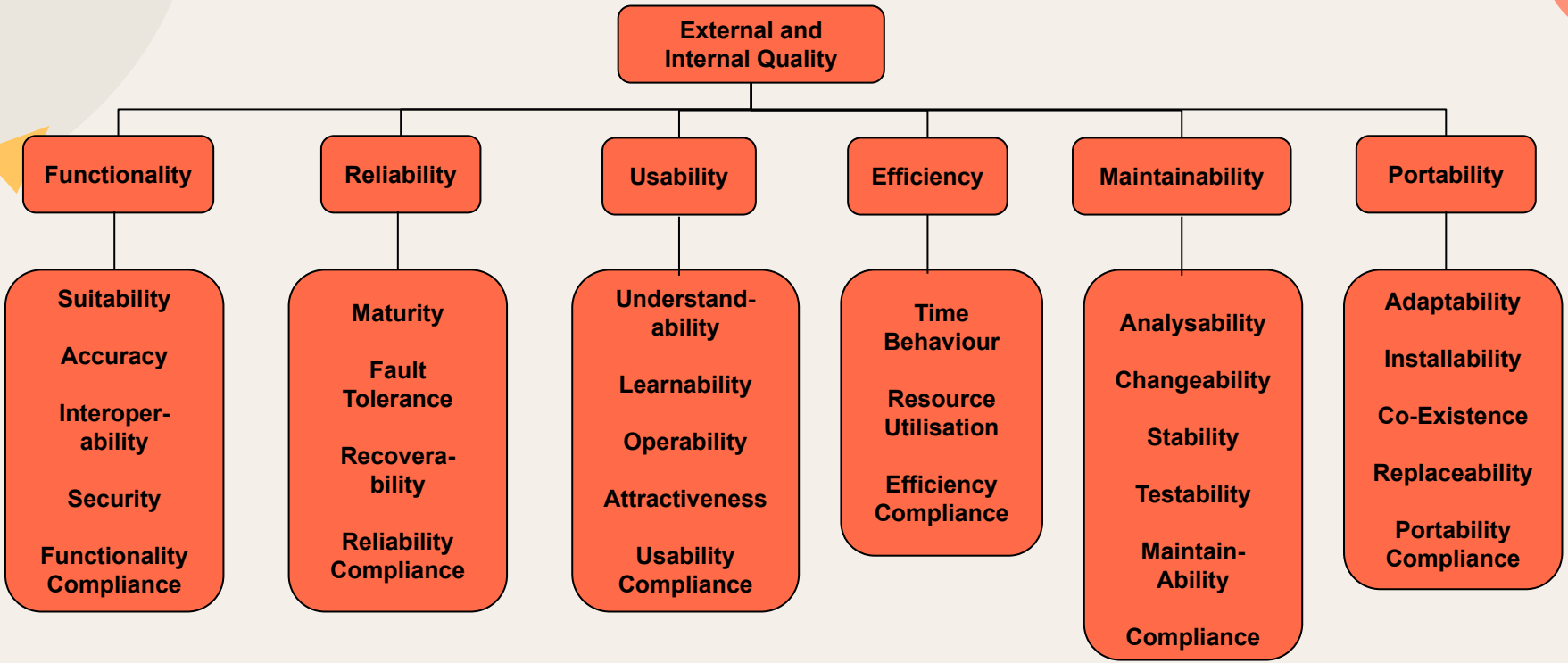
Quality Assurance

- ISO 9126 Model as a guideline for software development standards
- Rigorous testing with different test cases. Consideration of edge cases to ensure product is robust.

ISO 9126 Model



Test Cases Example

Case	Test	Test Data	Expected Result	Actual Result	Status (pass/fail)	Notes
1	Email Validation (User enters valid email format)	Email: hello#mail.com	Input field should flag and alert user to enter a valid email format	Input field flags and alert ot the user to enter a valid email format	Pass	Nil
2	Empty Input Fields for Authentication	Email: “” (empty input) Password: “” (empty input)	Form should flag that the input field is required before the user tries to login	Form flags that the input field is required	Pass	Nil

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04

Project Management

Efficiency is the key to success

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Methodology and Software used

- **Agile Methodology**
  Incremental development
- **Trello**
  Helps track progress of deliverables

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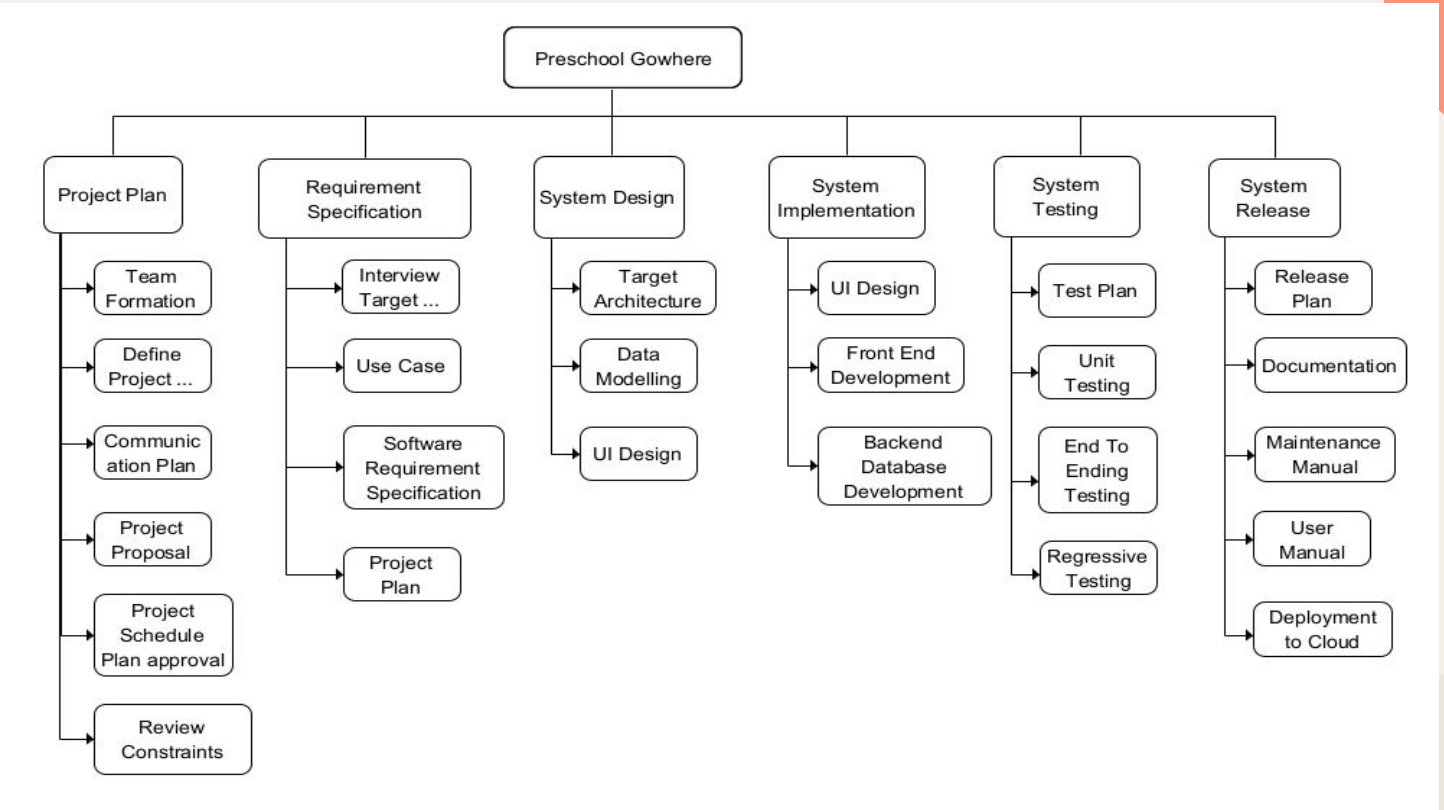
Work Breakdown Structure



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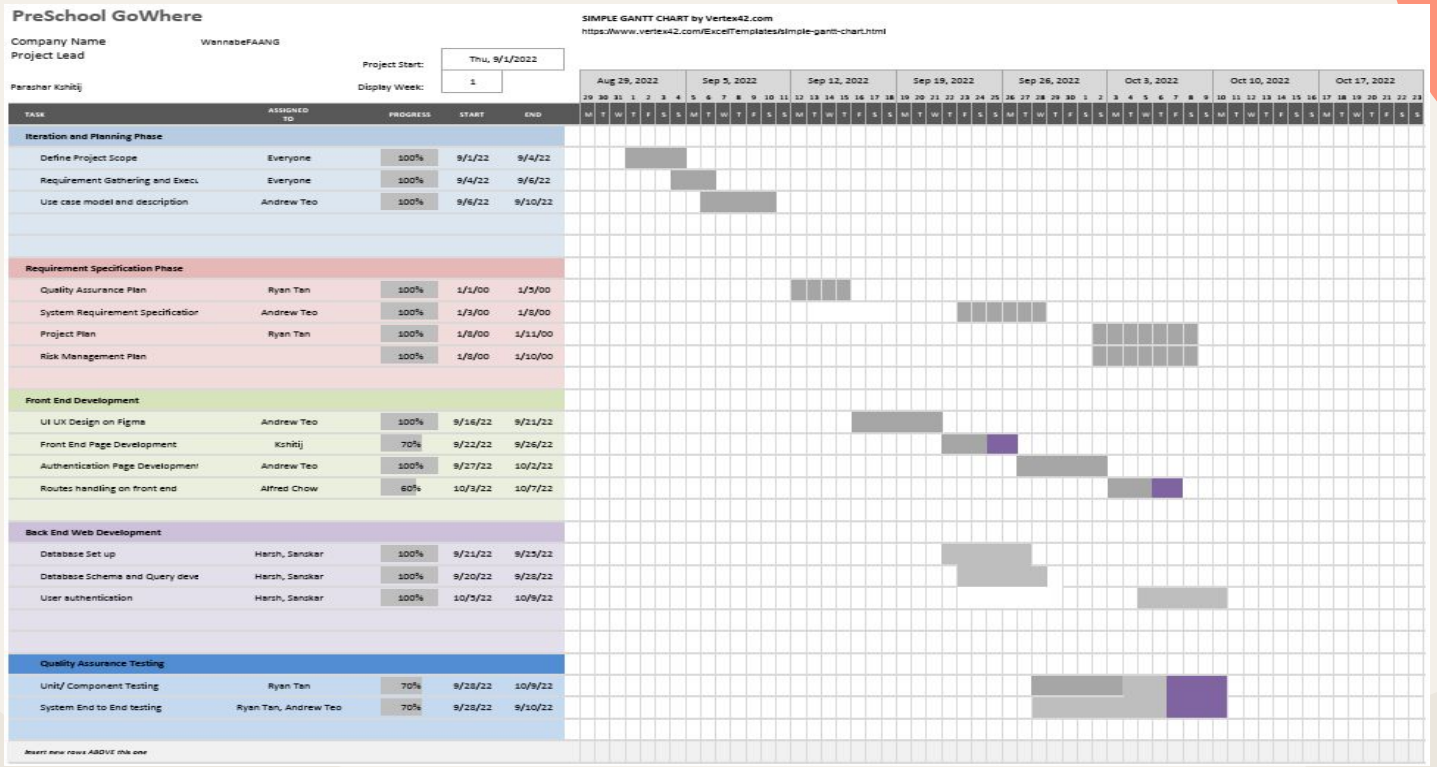
Project Timeline



PreSchool GoWhere

Company Name: WannabeFAANG
Project Lead: Parashar Kshitij
Project Start: Thu, 9/1/2022
Display Week: 1

SIMPLE GANTT CHART by Vertex42.com
https://www.vertex42.com/ExcelTemplates/simple-gantt-chart.html

Aug 29, 2022 | Sep 5, 2022 | Sep 12, 2022 | Sep 19, 2022 | Sep 26, 2022 | Oct 3, 2022 | Oct 10, 2022 | Oct 17, 2022

TASK	ASSIGNED TO	PROGRESS	START	END
Iteration and Planning Phase				
Define Project Scope	Everyone	100%	9/1/22	9/4/22
Requirement Gathering and Execu	Everyone	100%	9/4/22	9/6/22
Use case model and description	Andrew Teo	100%	9/6/22	9/10/22
Requirement Specification Phase				
Quality Assurance Plan	Ryan Tan	100%	1/1/00	1/3/00
System Requirement Specificatior	Andrew Teo	100%	1/3/00	1/8/00
Project Plan	Ryan Tan	100%	1/8/00	1/11/00
Risk Management Plan		100%	1/8/00	1/10/00
Front End Development				
UI UX Design on Figma	Andrew Teo	100%	9/16/22	9/21/22
Front End Page Development	Kshitij	70%	9/22/22	9/26/22
Authentication Page Development	Andrew Teo	100%	9/27/22	10/2/22
Routes handling on front end	Alfred Chow	60%	10/3/22	10/7/22
Back End Web Development				
Database Set up	Harsh, Sanskar	100%	9/21/22	9/25/22
Database Schema and Query deve	Harsh, Sanskar	100%	9/20/22	9/28/22
User authentication	Harsh, Sanskar	100%	10/3/22	10/9/22
Quality Assurance Testing				
Unit/ Component Testing	Ryan Tan	70%	9/28/22	10/9/22
System End to End testing	Ryan Tan, Andrew Teo	70%	9/28/22	9/10/22

Insert new rows ABOVE this one

Project Code Size Estimation

Function Points are used for code size estimation

Role	Supported Functionalities
User	Get information about pre-school within their specified criteria
	Request a report containing pre schools information which will be emailed to them.
	View all preschools in Singapore and any relevant information.
	Bookmark past filters for ease of access in the future.

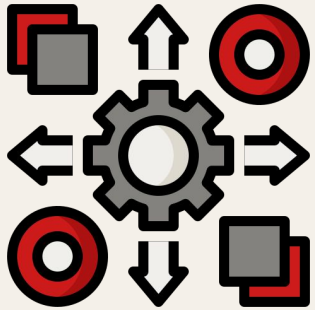
Function Points - Unadjusted Function Points

Characteristics	Low		Medium		High	
Inputs	1	x 3	1	x 4	0	x 6
Outputs	0	x 4	2	x 5	0	x 7
Inquiries	2	x 3	0	x 4	0	x 6
Logical Files	2	x 7	0	x 10	0	x 15
Interfaces	2	x 5	0	x 7	0	x 10
Unadjusted FP	23		14		0	
Total=L+M+H	37					

Function Points - Influence Factors

Influence Factors	Score
Data Communications	4
Distributed Functions	4
Performance	2
Heavily used	3
Transaction Rate	5
Online data entry	5
End-user efficiency	2

On-line data update	3
Complex Processing	1
Reusability	4
Installation Ease	1
Operational Ease	1
Multiple sites	0
Facilitate Change	3
Total Score	**38**



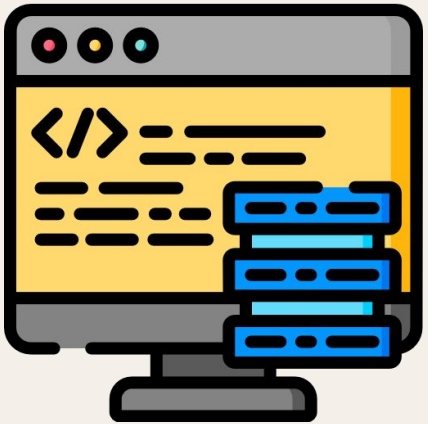
Influence Multiplier
= Total score * 0.01 + 0.65 = 38 * 0.01 + 0.65 = 1.03

Adjusted FP
= Unadjusted FP * Influence Multiplier = 37 * 1.03 = 38.11

Project Code - Lines of Code

Each FP in Javascript → **35** lines of code

Lines of Code (LOC) = 38.11 FP x 35 LOC/FP
= **1333**



Project Code - Efforts, Duration and Estimation

Working days includes **5** days in a week

Effort = Size / Production Rate = (1333 LOC) / (39 LOC/ PD) = 34 PD

Duration = 3 x $(\text{Effort})^{1/3}$ = 3 x $(34)^{⅓}$ = 9.7 D

Initial Schedule = 9.7 Days / 5 days a week = 1.94 weeks

Team size = 34 PD / 9.7 D = 3.5 P = 4 Persons

Working hours include 8 hours in a working day

Total person-hours (PH) = 34 PD x 8 hours = 272 PH

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Project Code - Cost Estimation

Hardware: Developer Workstation	
6 - Lenovo ThinkPad P16 Mobile Workstation	**$18000**
12th Generation Intel i5-12699HX Processor	
8 GB RAM	
256GB SSD	

Software License Provided By Third Party	
Microsoft Visual Studio Code	**$0.00**
Supabase	**$0.00**
Firebase	**$0.00**
Google Maps API	**$0.00**

Total cost	**$18000**

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05

Risk Management

Predict and Manage existing and future risk

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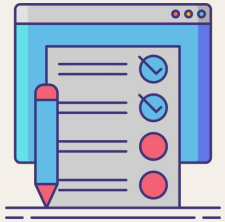
Risk Management

Risk Identification

Risk Analysis



Risk Monitoring

Risk Response Planning

Risks Identification

Specification Delay

When finalization of specification is not done on time

Lack of Customer Feedback

When the lack of input results in objectives of app not being met

Changes to functionalities

When there are more changes than expected,leading to redesign of application

Underhanded staff

When staff leaves the project or are absent due to health issues

Risk Analysis(Qualitative)

Probability

High
- >80%

Medium
- 20%- 80%

Low
- <20%

Impact

High
- Great impact

Medium
- Slight impact

Low
- Relatively low impact

Qualitative Risk Analysis

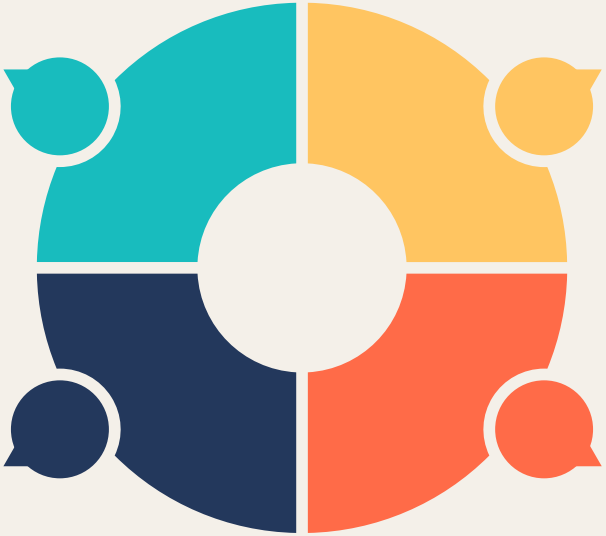
Impact				
	High	Identity Theft	Password Sniffing	-
	Medium	-	Specification delays	Outbound Email Spam Filter
	Low	Underhanded staff	Lack of customer feedback	Unexpected changes to functional requirements
		Low	Medium	High
Probability				

Risk that fall under red and yellow zones will have a risk response planning

Risk Response Planning

Avoid

Eliminate the threat by eliminating the cause



Mitigate

Identify ways to reduce probability or impact of risk

Accept

Nothing will be done

Transfer

Make another party responsible for risk

Risk Log

Examples:

More Changes to functional requirements than expected
Impact Severity: High
Probability: 15%
Zone : Yellow
Impacts: Changes to functional requirements may result in an update/change in the web application features. A redesign of the application might even be required, depending on how much modification is required.
Risk reduction: When describing the application's functional requirements, be thorough. Push out more prototypes to seek customer feedback before building the full feature of the application.

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Risk Log

Specification Delays

Impact severity : High

Probability: 10%

Zone:Yellow

Impacts: The PreSchool GoWhere project's schedule for all of the following phases will be pushed back if the specification is not finalized on time.

Risk Reduction: Monitor progress of specification carefully and minimize delays

06

Release Management

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Approach

Agile Methodology

- Baseline built (Version 1.0.0) released after all implementation
- Minor Release includes bug fixes and improvement (Version 1.1.0)
- Major Release includes major overhaul (Version 2.0.0)

Release Notification

Stakeholders	Notification Method	Information included in the notification	Timeframes for Receipt of Notification
Users	Emails, System Notification	Change Log	Upon deployment of new release
Team Members	Meeting, Emails	Changes to be made, known issues and bugs to be fixed. Deadline of release.	After change has been confirmed and approved by the CCB.
Investors and Sponsors	Meetings, Emails	Changes to be made, bugs to be fixed	1 week prior to version release.

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https://pre-school-gowhere.web.app/

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Thank You!

Do you have any questions?
Email us at
wannabefaang@outlook.com

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