

ChildToy Project Plan

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Executive Summary

This document provides the definition of the project, addressing and capturing its characteristics and limitations, and how to deliver and evaluate the outcomes.

The purpose of this project is to develop a web-based game that satisfies the requirements proposed by the customer - ChildToy. We intend to evaluate the potential and end-user feedback so as to provide a basis for future improvements.

Development Methodology

ChildToy will be developed and delivered in Scrum due to the following reasons:

- Scrum enables flexibility and adaptability. The development team can work simultaneously rather than sequentially. Developers do not wait until all the questions are addressed before they start to code. Changes can be evaluated and adapted into a project during the life of the project (Sharma and Hasteer, 2017; Srivastava, Bhardwaj and Saraswat, 2017).
- As planned, there are only five requirements included in the demonstration, tasks should be prioritised by the order of importance. Thus, the ultimate goal of a sprint is to complete as soon as possible usable pieces of prioritised work that will have business value. Scrum removes unnecessary factors to affect the team's velocity, such as a boss telling them what to do. The development team as a whole is responsible for what is required and this results in faster outcomes delivery with higher quality and success (Schwaber K., 1997) .
- Using Scrum, the development team works with the product owner to determine what is included in each sprint. In this way, the team knows exactly

what they need to offer. It also reduces the likelihood that your build will contain surprises or unplanned features. Quality Assurance (QA) and user acceptance testing (UAT) will occur throughout the development lifecycle to ensure acceptance criteria have been met and shippable code is being produced. A key reason for this is that the product owner can quickly try out usable segments of the product and constantly give feedback on their findings. This process contributes greatly to customer/user satisfaction.

- Last but not least, standup meetings in Scrum notify everyone about the status of the project so issues can be addressed quickly. The planning meeting prepares the team for the next sprint. Reflections help teams learn from previous sprints and apply new ways to improve future sprints.

Accepted Requirements

See [Appendix A](#) for justification of the highlighted requirements chosen for the demo.

- The system should run on L/W/IOS
- Data must be stored in the most efficient way.
- Additional languages should be available as free downloadable packs
- A player should be able to create a user profile
- A player should be able to create a persona
- Sounds should be able to be muted from the UI with a single keypress.
- It should be possible to create a multiplayer game
- The device should be controllable via touch, or text/keyboard input
- From the parents' point of view, the game should keep the kids engaged
- Gameplay should be easy enough so the kids won't need to ask their parents for help

Project Milestones, Deliverables

Project Management Tool

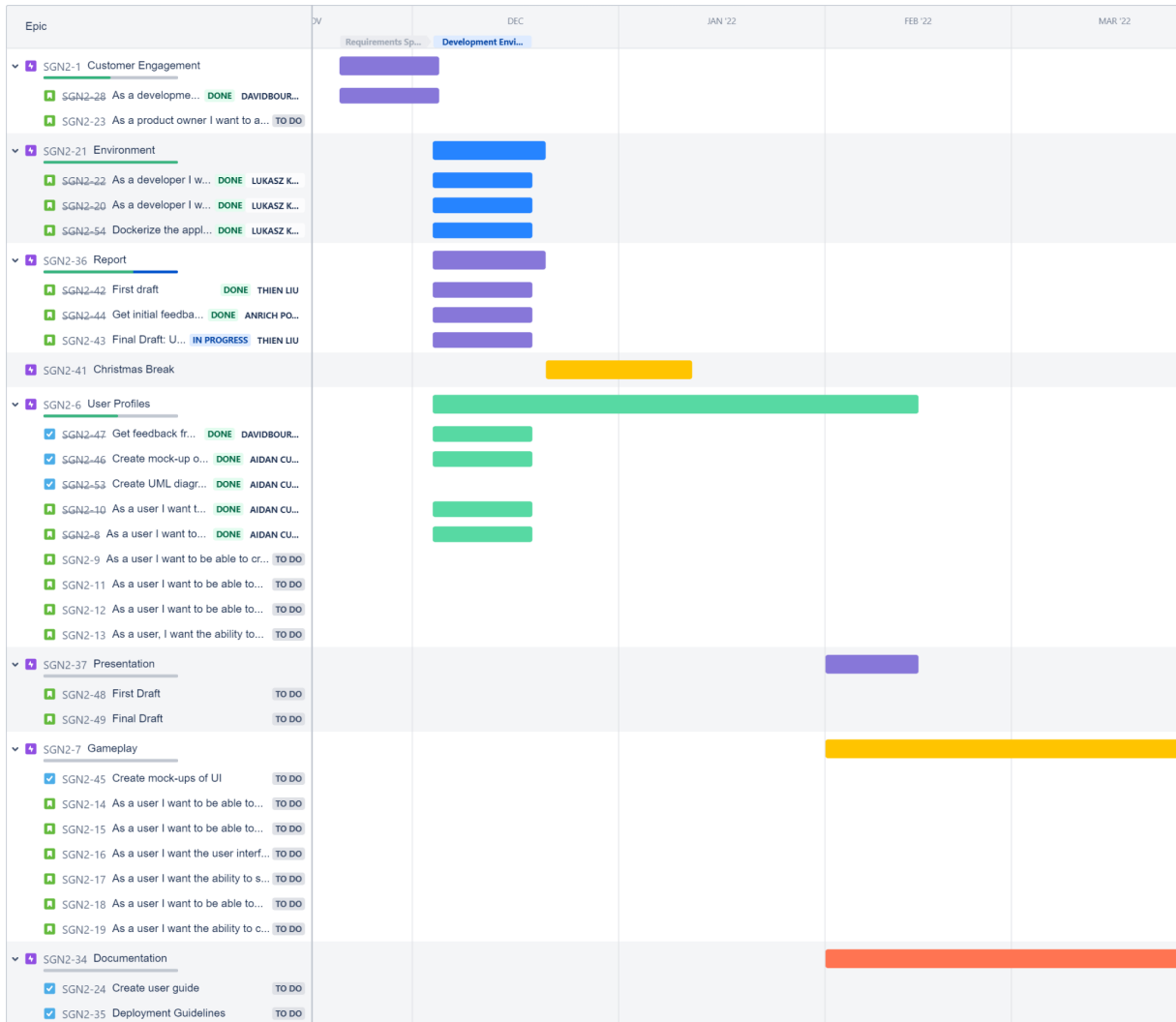
The project will be managed using Jira, an industry standard project management tool, which supports agile workflows, issue tracking, and multiple plugins (Mishra and Mishra, 2013; Mittal and Mehta, 2020).

Project Phases

The project will be developed in four phases:

- **Requirement gathering/clarification, [UX definition](#) and infrastructure setup.** At this phase, the team will set up several meetings with ChildToy to gather the requirements and create a project plan based on detailed and validated requirements that ensure the project team manages the project effectively and fulfils the contract (See [Appendix B](#)).
- **User profile management.** This phase focuses on implementing the functionality to allow users to manage their profiles and personas.
- **Gameplay implementation.** The gameplay is developed during this phase.
- **Achievement.** The project is implemented properly and delivered. Lessons learned from the project are reused to increase productivity.

These phases are divided into seven epics, each containing user stories which identify specific functionality from a specific user's point of view. Each story is further divided into tasks which can be assigned to individuals on the team. The estimated delivery date for project completion is 31st March. See [Appendix C](#) for a detailed breakdown of the first three sprints.



[Jira Board with Epics, Stories and Tasks](#)

Legal Compliance

In line with the GDPR directive, users will have the right to access, edit and delete any data that is held, furthermore. Users will always be notified of any changes to their data during process or erasure (GDPR, 2017). User details are stored in a secure database where passwords are hashed using an approved python library. See [Appendix D](#) for the initial user database design.

Communication and Documentation

The technical writer will collaborate with ChildToy to define the following:

- Installation guides
- Development guides
- API documentation
- Architecture design documentation

	Sprint Commitments	Documentation	Update Report
Frequency	Every two weeks	Ongoing After each release	Weekly
Content	<ul style="list-style-type: none"> • Communicate sprint goals and commitments • Communicate risks, if any, for the sprint • Highlight dependencies 	<ul style="list-style-type: none"> • Release notes • TBD with technical writer and client 	<ul style="list-style-type: none"> • Key accomplishments • Upcoming milestones • Project management review • Risks • Overall project status

Status Report

The following table will be used as the template for project status report.

See [Appendix E](#) for report status definitions.

Issue/Risk	Action	Owner	Target	Status
Issue 1	Actionable item to resolve the issue 1	Owner Who Takes Action	Date To Complete	Refer to Appendix E - Report Status Definitions
Risk 1	Actionable item to resolve the risk 1	Owner Who Takes Action	Date To Complete	Refer to Appendix E - Report Status Definitions

Quality Assurance

Software produced will be thoroughly tested. The test strategy includes:

- **Unit tests:** written by developers while coding.
- **Manual tests:** performed by testers to make sure the software behaves as expected.
- **Automation tests:** written and executed by testers to automate repetitive test cases.
- **Regression tests:** performed by developers after any changes have been made, pr defects have been addressed.
- **Integration/System test:** test the entire system and its dependencies in different environments.

Project Acceptance Criteria

When all major commitments and deliverables have been closed, the project success criteria have been met.

- All issues and action items have been resolved and approved.
- Validation that the product meets the specifications
- All the executable source code and documentation have been delivered to the customer.
- A project completion statement exists.

(word count: 1044 words)

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Appendices

Appendix A - Demo Requirements Justification

The system should run on L/W/IOS

One of the major requirements is to develop a system that will be reliable, flexible, and able to work on different operating systems. We have therefore decided to develop a web-based game, as the game is then able to run on all platforms.

Data Must be Stored in the most efficient way

Data management is crucial to the success of any project. As our game is intended to be a web based application, a relational database such as MySQL will be used.

Log-in details are to be encrypted, and will be stored independently to the player progression and history.

Additional languages should be available as free downloadable packs.

As we are planning a worldwide release, multiple languages will need to be available. For the purposes of the Demo, we will be enabling English and French. More languages will be available at the final release stage

A player should be able to create a user profile

Users should be able to create and maintain their own profiles. This would allow progression and personal preferences to be stored and reloaded. Due to the young targeted age group, parents will be able to monitor and regulate their children's profile.

A player should be able to create a persona

No one would like to play a boring game; therefore, it will be reasonable to represent humans using different creatures. For our case, bear, giraffe, and penguin will be our personal representation in the application. Different avatars bring more energy and interest into the game.

Appendix B - Initial UX Design Concepts

B.1 Login Page

The screenshot shows the login page for 'Something Fruity'. At the top left is the logo 'Something Fruity' in orange and green. At the top right are links for 'Register' and 'Log In'. Below the header are two input fields: 'Username' and 'Password'. A blue 'Log In' button is centered below the fields. At the bottom, it says 'Implemented in Python using the Flask framework'.

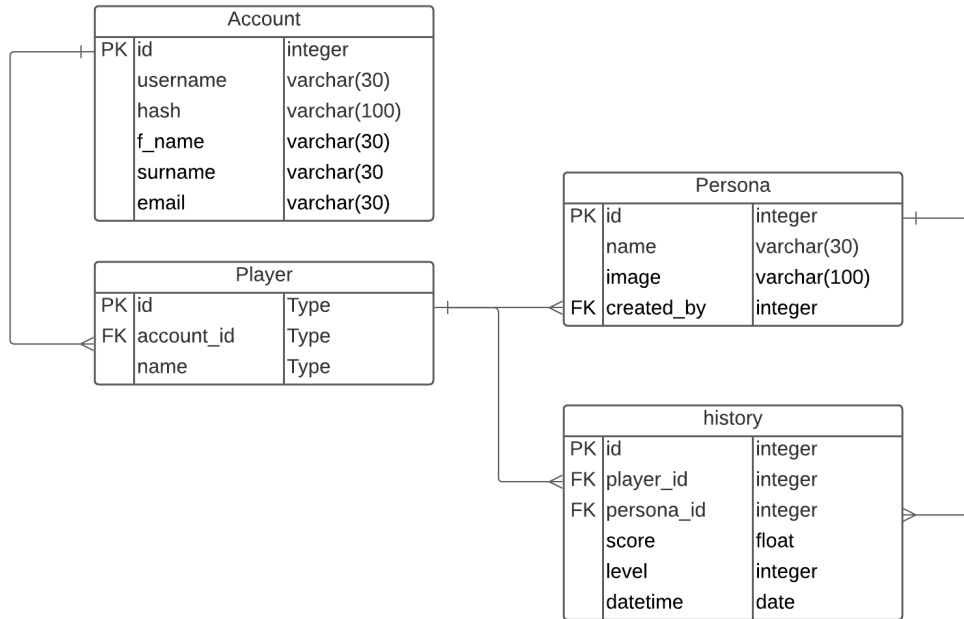
B.2 Registration Page

The screenshot shows the registration page for 'Something Fruity'. At the top left is the logo 'Something Fruity' in orange and green. At the top right are links for 'Register' and 'Log In'. Below the header is a line of text: 'Register for a new account or [login](#) if you have an account already'. Below this are six input fields: 'Username', 'Password', 'Confirm Password', 'Forename', 'Surname', and 'Email'. A blue 'Register' button is centered below the fields. At the bottom, it says 'Implemented in Python using the Flask framework'.

Appendix C - Sprint Estimation

Task	Duration	Start	Finish	Resource
Sprint 1 - Kickoff	10 days	06/12/21	17/12/21	
Infrastructure setup	3 days	06/12/21	08/12/21	Project Team
Create and design the application's structure	10 days	06/12/21	17/12/21	Project Team
Initiate user guide	2 days	06/12/21	07/12/21	Technical Writer
Initiate deployment guide	2 days	07/12/21	09/12/21	Technical Writer
UX workshop - define UI components + wireframes	2 days	06/12/21	08/12/21	UX Designer Project Team
Christmas Break	15 days	21/12/21	07/01/22	
Sprint 2 - Speedup	14 days	10/01/22	24/01/22	
Account registration	2 days	10/01/22	12/01/22	Project Team
Login	2 days	12/01/22	14/01/22	Project Team
Start a new game	2 days	15/01/22	16/01/22	Project Team
Profile details	3 days	16/01/22	19/01/22	Project Team
Create user persona	4 days	20/01/22	24/01/22	Project Team
UX refinement + support	5 days	10/01/22	15/01/22	UX Designer
Deployment guide - draft	2 days	10/01/22	11/01/22	Technical Writer
User Guide - draft	5 days	12/01/22	17/01/22	Technical Writer
Sprint 3 - Goal	14 days	26/01/22	09/02/22	
Gameplay implementation	7 days	26/01/22	02/02/22	Project Team
Mute/Unmute	1 day	31/01/22	01/02/22	Project Team
Quit game	1 day	02/02/22	03/02/22	Project Team
Localisation	4 days	04/02/22	08/02/22	Project Team
Delete account	1 day	08/02/22	09/02/22	Project Team
User Guide - completion	4 days	05/02/22	09/02/22	Technical Writer
Deployment guide - completion	3 days	02/02/22	04/02/22	Technical Writer
UX refinement + support	5 days	31/01/22	04/02/22	UX Designer

Appendix D - Initial ERD Design



Appendix E - Report Status Definitions

COMPLETE	Milestone is complete as of the date noted
TBD	Dates are pending following planning sessions
GREEN	On schedule, on budget, no significant risks or issues
AMBER	There are problems with the schedule or the budget, but they can be fixed with corrective actions.
RED	There are serious issues, and the project is either delayed or has a significant budget overrun.

Appendix F - Scope Change Management

Project plan information is subject to change as the project progresses. Although the changes are safe and necessary, it is important to note that changes to the project plan affect at least one of three key success factors: time available, resources available, or quality of the project. Decisions about changing the project plan should be adjusted by following these steps:

- **Step 1** - As soon as changes that affect project scope, schedule, staffing, or expenses are identified, the project manager documents the issue.
- **Step 2** - The project team reviews the changes, determines the impact associated with the project, and ultimately decides whether to approve or reject the changes.
- **Step 3** - After approval or rejection (by the project team or administrator), the project manager will notify the original applicant of the steps taken. There is no appeal procedure.