

**OpenProject Output for  
DOST STARBOOKS: Whiz Challenge**

Project Documentation Submitted to the Faculty of the  
School of Computing and Information Technologies  
Asia Pacific College

In Partial Fulfillment of the Requirements for  
Systems Analysis and Detailed Design  
MSYADD1

Submitted by:

**Dumbrique, Kelly (Team Leader)**

**Gercan, Arcielle Marie (Member)**

**Quianzon, Shandrae Lois (Member)**

**Salipande, Janice Maxene (Member)**

G06 NEXUS – SF 231

Submitted to:

**Mr. Jose Eugenio L. Quesada**

Course Instructor

August 2025

1<sup>st</sup> Term

A.Y. 2025 – 2026

# INITIAL BUDGETS

## 1. Initiation Phase

### 1. Initiation Phase Budget

Added by Shandrae Lois Quianzon 16 days ago. Updated about 1 hour ago.

Cost type Budget  
Fixed date 08/29/2025  
Spent (ratio)  7% Total progress

Description The Initiation Phase budget covers all essential costs required to formally start the STARBOOKS Whiz Challenge project for DOST-STII. This includes expenses for setting up the initial work environment, conducting the kick-off meeting, and preparing the necessary tools, materials, and resources to define the project scope and objectives.

#### UNITS

##### Planned unit costs





UNITS	COST TYPE	COMMENT	BUDGET
1.00	Cloud Services Monthly Subscription	One Drive 100GB storage	PHP 100.00
1.00	Office Supplies Php100	Bond Papers for Printing of Forms	PHP 100.00
8.00	Transportation expenses Php 100	Travel to DOST-STII	PHP 800.00
			PHP 1,000.00

##### Actual unit costs

WORK PACKAGE	UNITS	COST TYPE	COSTS
<a href="#">Task-#370: 1.0.1 Prospective Client Discovery</a>	2.00	Transportation expenses Php 100	PHP 200.00
<a href="#">Task-#371: 1.0.2 Finalize choice of IIP/PBL Client</a>	2.00	Transportation expenses Php 100	PHP 200.00
<a href="#">Task-#365: 1.1 Design Thinking Stage 1: Empathize</a>	2.00	Contingency Reserve	PHP 200.00
			PHP 600.00

#### LABOR

##### Planned labor costs

HOURS	USER	COMMENT	BUDGET
100.00 hours	 Kelly Dumbrique	Contribution to Transportation Costs for DOST-STII Visits	PHP 10,000.00
100.00 hours	 Arcielle Gercan	Contribution to Transportation Costs for DOST-STII Visits	PHP 10,000.00
100.00 hours	 Shandrae Lois Quianzon	Contribution to Transportation Costs for DOST-STII Visits	PHP 10,000.00
100.00 hours	 Janice Maxene Salipande	Contribution to Transportation Costs for DOST-STII Visits	PHP 10,000.00
			PHP 40,000.00

##### Actual labor costs

WORK PACKAGE	HOURS	USER	COSTS
<a href="#">Task-#365: 1.1 Design Thinking Stage 1: Empathize</a>	20.00 hours	 Janice Maxene Salipande	PHP 2,000.00
<a href="#">Task-#376: 1.2.4 Create Stakeholder Analysis</a>	2.00 hours	 Arcielle Gercan	PHP 0.00
<a href="#">Task-#375: 1.2.3 Create Scope</a>	2.00 hours	 Janice Maxene Salipande	PHP 0.00
<a href="#">Task-#370: 1.0.1 Prospective Client Discovery</a>	10.00 hours	 Kelly Dumbrique	PHP 0.00
<a href="#">Task-#371: 1.0.2 Finalize choice of IIP/PBL Client</a>	5.00 hours	 Kelly Dumbrique	PHP 0.00
<a href="#">Task-#373: 1.2.1 Create Charter</a>	2.00 hours	 Kelly Dumbrique	PHP 200.00

## 2. Planning Phase

### 2. Planning Budget Phase

Added by Arcielle Gercan 16 days ago. Updated 15 days ago.

Cost type Budget  
Fixed date 08/13/2025  
Spent (ratio)  8% Total progress

Description The Planning Phase budget provides the resources needed to design, organize, and finalize the development plan for the STARBOOKS Whiz Challenge project.

#### UNITS

##### Planned unit costs

UNITS	COST TYPE	COMMENT	BUDGET
1.00	Cloud Services Monthly Subscription	One Drive 100GB storage	PHP 100.00
5.00	Food Allowance	Snacks & drinks for meetings	PHP 500.00
8.00	Transportation expenses Php 100	Travel to DOST-STII	PHP 800.00
4.00	Miscellaneous Php100	Mobile data load for devices	PHP 400.00
			PHP 1,800.00

##### Actual unit costs

WORK PACKAGE	UNITS	COST TYPE	COSTS
			PHP 0.00

#### LABOR

##### Planned labor costs

HOURS	USER	COMMENT	BUDGET
100.00 hours	 Arcielle Gercan		PHP 10,000.00
100.00 hours	 Janice Maxene Salipande		PHP 10,000.00
100.00 hours	 Kelly Dumbrique		PHP 10,000.00
100.00 hours	 Shandrae Lois Quianzon		PHP 10,000.00
			PHP 40,000.00

##### Actual labor costs

WORK PACKAGE	HOURS	USER	COSTS
<a href="#">Task-#309: 2.3.1.2.1 Dataflow Diagram Level 2.1 Manage Player Account</a>	3.00 hours	 Shandrae Lois Quianzon	PHP 300.00
<a href="#">Task-#366: 2.3.1.2.2 Dataflow Diagram Level 2.2 Play Games</a>	3.00 hours	 Arcielle Gercan	PHP 300.00
<a href="#">Task-#304: 2.3.1.2 Dataflow Diagram Level 1</a>	3.00 hours	 Janice Maxene Salipande	PHP 300.00
<a href="#">Task-#1921: 2.3.1.2.3 Dataflow Diagram Level 2.3 View Stats and Badges</a>	3.00 hours	 Arcielle Gercan	PHP 300.00
<a href="#">Task-#1929: 2.3.1.2.4 Dataflow Diagram Level 2.4 Manage Admin Account</a>	3.00 hours	 Kelly Dumbrique	PHP 300.00
<a href="#">Task-#1619: 2.3.1.2.6 Dataflow Diagram Level 2.6 View Analytics</a>	3.00 hours	 Janice Maxene Salipande	PHP 300.00
<a href="#">Task-#1610: 2.3.1.2.5 Dataflow Diagram Level 2.5 Manage Quiz Game</a>	3.00 hours	 Janice Maxene Salipande	PHP 300.00
<a href="#">Summary-Task-#340: 2.1 Design Thinking Stage 2: Define</a>	5.00 hours	 Arcielle Gercan	PHP 500.00
<a href="#">Task-#303: 2.3.1.1 Context Diagram</a>	3.00 hours	 Shandrae Lois Quianzon	PHP 300.00

# ROADMAP

## 1 – Planning and Design

### 1 - Planning and Design

Defining project goals, gathering requirements, and designing the system through diagrams and wireframes.

 64% Total progress

25 closed (64%) 14 open (36%)

#### ^ RELATED WORK PACKAGES

- ~~Phase #343~~: 1.0 Initiation Phase
- ~~Phase #344~~: 2.0 Planning Phase
- ~~Phase #345~~: 3.0 Executing Phase
- ~~Task #365~~: 1.1 Design Thinking Stage 1: Empathize
- ~~Task #367~~: 3.1 Design Thinking Stage 4: Prototype
- ~~Task #368~~: 3.2 Design Thinking Stage 5: Test
- ~~Task #370~~: 1.0.1 Prospective Client Discovery
- ~~Task #371~~: 1.0.2 Finalize choice of IIP/PBL Client
- ~~Task #373~~: 1.2.1 Create Charter
- ~~Task #374~~: 1.2.2 Create Objectives
- ~~Task #375~~: 1.2.3 Create Scope
- ~~Task #376~~: 1.2.4 Create Stakeholder Analysis
- ~~Task #383~~: 2.3.1.1 Context Diagram
- ~~Task #384~~: 2.3.1.2 Dataflow Diagram Level 1
- ~~Task #387~~: 2.3.1.2.1 Dataflow Diagram Level 2.1 Manage Player Account
- ~~Task #388~~: 2.3.1.2.2 Dataflow Diagram Level 2.2 Play Games
- ~~Task #391~~: 2.3.2.1.1.1 Test Case for Use Case 2.3.2.1.1
- ~~Task #392~~: 2.3.2.1.1.2 Test Case for Use Case 2.3.2.1.1
- ~~Task #393~~: 2.3.2.1.1.0 Activity Diagram with Swimlanes for Use Case 2.3.2.1.1
- ~~Task #1721~~: 2.3.1.2.3 Dataflow Diagram Level 2.3 View Stats and Badges
- ~~Task #1723~~: 2.3.1.2.4 Dataflow Diagram Level 2.4 Manage Admin Account
- ~~Task #1812~~: 2.3.1.2.5 Dataflow Diagram Level 2.5 Manage Quiz Game
- ~~Task #1813~~: 2.3.1.2.6 Dataflow Diagram Level 2.6 View Analytics

## 2 – Development

### 2 - Development

Building the core system features and integrating modules based on the design.

 0% Total progress

0 closed (0%) 57 open (100%)

#### ^ RELATED WORK PACKAGES

- ~~Task #386~~: 3.1.1.1.1 Task 01
- ~~Task #1669~~: 3.4.1.1.1 Implement registration form
- ~~Task #1670~~: 3.4.1.1.2 Implement login system
- ~~Task #1671~~: 3.4.1.1.3 Validate inputs & error handling
- ~~Task #1672~~: 3.4.1.1.4 Store and retrieve credentials securely
- ~~Task #1674~~: 3.4.1.2.1 Create profile page layout
- ~~Task #1675~~: 3.4.1.2.2 Implement profile editing functionality
- ~~Task #1676~~: 3.4.1.2.3 Display basic player details
- ~~Task #1678~~: 3.4.1.3.1 Develop quiz game logic
- ~~Task #1679~~: 3.4.1.3.2 Build UI for question and answer display
- ~~Task #1684~~: 3.4.2.1.1 Develop memory game logic
- ~~Task #1685~~: 3.4.2.1.2 Design game board and card UI
- ~~Task #1687~~: 3.4.2.2.1 Develop puzzle game logic
- ~~Task #1688~~: 3.4.2.2.2 Create puzzle categories and difficulty levels
- ~~Task #1690~~: 3.4.2.3.1 Design badge icons and UI layout
- ~~Task #1691~~: 3.4.2.3.2 Implement badge unlocking logic
- ~~Task #1692~~: 3.4.2.3.3 Update badge display dynamically after achievements
- ~~Task #1695~~: 3.4.3.1.1 Build lobby system
- ~~Task #1696~~: 3.4.3.1.2 Implement matchmaking and room creation
- ~~Task #1697~~: 3.4.3.1.3 Develop real-time quiz synchronization
- ~~Task #1698~~: 3.4.3.1.4 Show results and winner after each match
- ~~Task #1700~~: 3.4.3.2.1 Implement in-game notifications
- ~~Task #1701~~: 3.4.3.2.2 Add live updates for scores and progress
- ~~Task #1702~~: 3.4.3.2.3 Optimize system for low-latency connections
- ~~Task #1704~~: 3.4.3.3.1 Track performance across all game modes
- ~~Task #1705~~: 3.4.3.3.2 Store and update earned stars
- ~~Task #1706~~: 3.4.3.3.3 Display overall performance stats in player profile
- ~~Task #1707~~: 3.4.3.3.4 Integrate stats with badges earned display
- ~~Task #1710~~: 3.4.4.1.1 Implement player account list and search
- ~~Task #1711~~: 3.4.4.1.2 Manage admin roles and access levels
- ~~Task #1713~~: 3.4.4.2.1 Add/update/delete quiz questions
- ~~Task #1715~~: 3.4.4.3.1 Integrate AI for auto-generating quiz questions
- ~~Task #1716~~: 3.4.4.3.2 Test and refine AI outputs for accuracy

# WORK PACKAGE

Parent: 2.0 Planning Phase ✎ ✕

←

SUMMARY TASK 2.3 Requirements and Analysis Design Diagrams

Closed ▾

#369: Created by Joe Gene Quesada APC. Last updated on 08/29/2025 11:46 AM.

WBS:	2.3
Work Package:	Requirements and Analysis Design Diagrams
Package Owner:	G06 NEXUS
Owner Organization:	DOST-STII
Participants:	<ul style="list-style-type: none"><li>Kelly Dumbrique (3 hrs)</li><li>Arcielle Marie Gercan (3 hrs)</li><li>Shandrae Lois Quianzon (3 hrs)</li><li>Janice Maxene Salipande (3 hrs)</li></ul>
Description:	Preparing the requirements and analysis design diagrams that define the STARBOOKS Whiz Challenge system. It includes the creation of Data Flow Diagrams (DFDs), Use Case Models and Descriptions, and the Entity-Relationship Diagram (ERD). These diagrams will serve as the system's functional and data blueprint, ensuring that both client needs and technical requirements are fully represented. <i>(Currently, the team is working on the Data Flow Diagrams as the first sub-task.)</i>
Completion State:	Data Flow Diagrams (Levels 0, 1, and 2) are done.
Assumptions:	<ul style="list-style-type: none"><li>Client requirements from previous stages are sufficient to build accurate diagrams.</li><li>Team members are familiar with diagramming tools.</li></ul>
Risks:	<ul style="list-style-type: none"><li>Misinterpretation of requirements may lead to inaccurate system diagrams.</li><li>Inconsistencies across DFDs, Use Cases, and ERD may cause design conflicts.</li></ul>
Risk Mitigation:	<ul style="list-style-type: none"><li>Conduct regular team reviews to validate diagrams against requirements.</li><li>Cross-check diagrams with adviser feedback to ensure consistency.</li></ul>
Budget:	PHP 0
Reference Docs:	

PEOPLE

Assignee

SQ

Shandrae Lois Quianzon

Responsible\*

KD

Kelly Dumbrique

JS

Janice Maxene Salipande

AG

Arcielle Gercan

Accountable

KD

Kelly Dumbrique

ESTIMATES AND PROGRESS

Work

- · Σ 24h

Remaining work

- · Σ 0h

% Complete

100% · Σ 100%

Spent time

24h ⌚

DETAILS

Priority \*

● Normal

Date

08/18/2025 - 08/26/2025

Project phase

🔗 Planning

Category

Documentation

Version

1 - Planning and Design

COSTS

Spent units

-

Labor costs

PHP 2,400.00

Unit costs

-

Overall costs

PHP 2,400.00

Budget

2. Planning Budget Phase

# BOARDS

## 1. Initiation Phase

[OpenProject](#) / [APC\\_2025\\_2026\\_T1\\_MI232\\_G06 NEXUS DOST: STARBOOKS Whiz Challenge](#) / [Boards](#) / Public: 01 Initiation Phase

### 01 Initiation Phase

To Do	Doing	For Review	Done
<div>+</div>	<div>+</div>	<div>+</div>	<div>+</div> <div><div>Closed</div><div>#377 - APC_2025_2026_T1_...</div><div>1.2.5 PM Foundations Ch 2 Initiate a project Completed</div><div>JS</div></div> <div><div>Closed</div><div>#365 - APC_2025_2026_T1_...</div><div>1.1 Design Thinking Stage 1: Empathize</div><div>JS</div><div>Apr 30, 2025 - Aug 14, 2025</div></div> <div><div>Closed</div><div>#371 - APC_2025_2026_T1_...</div><div>1.0.2 Finalize choice of IIP/PBL Client</div><div>CO</div><div>Apr 23, 2025 - Apr 30, 2025</div></div> <div><div>Closed</div><div>#370 - APC_2025_2026_T1_...</div><div>1.0.1 Prospective Client Discovery</div><div>CO</div><div>Mar 31, 2025 - Apr 30, 2025</div></div> <div><div>Closed</div><div>#343 - APC_2025_2026_T1_...</div><div>1.0 Initiation Phase</div><div>CO</div><div>Mar 31, 2025 - Aug 14, 2025</div></div>

## 2. Planning Phase

[OpenProject](#) / [APC\\_2025\\_2026\\_T1\\_MI232\\_G06 NEXUS DOST: STARBOOKS Whiz Challenge](#) / [Boards](#) / Public: 02 Planning Phase

### 02 Planning Phase

To Do	Doing	For Review	Done
<div>+</div> <div><div>To be sched...</div><div>#380 - APC_2025_20...</div><div>SUMMARY TASK 2.3.3 Entity Relationship Diagrams</div></div>	<div>+</div>	<div>+</div>	<div>+</div> <div><div>Closed</div><div>#366 - APC_2025_2026_T1_...</div><div>SUMMARY TASK 2.2 Design Thinking Stage 3: Ideate</div><div>SQ</div><div>Apr 30, 2025 - Aug 29, 2025</div></div> <div><div>Closed</div><div>#348 - APC_2025_2026_T1_...</div><div>SUMMARY TASK 2.1 Design Thinking Stage 2: Define</div><div>AG</div><div>Apr 30, 2025 - Aug 29, 2025</div></div> <div><div>Closed</div><div>#387 - APC_2025_2026_T1_...</div><div>TASK 2.3.1.2.1 Dataflow Diagram Level 2.1 Manage Player Account</div><div>SQ</div><div>Aug 18, 2025 - Aug 26, 2025</div></div> <div><div>Closed</div><div>#383 - APC_2025_2026_T1_...</div><div>TASK 2.3.1.1 Context Diagram</div><div>SQ</div><div>Aug 18, 2025 - Aug 26, 2025</div></div> <div><div>Closed</div><div>#384 - APC_2025_2026_T1_...</div><div>TASK 2.3.1.2 Dataflow Diagram Level 1</div><div>JS</div><div>Aug 18, 2025 - Aug 26, 2025</div></div> <div><div>Closed</div><div>#1813 - APC_2025_2026_T1_...</div><div>TASK 2.3.1.2.6 Dataflow Diagram Level 2.6 View Analytics</div><div>JS</div><div>Aug 18, 2025 - Aug 26, 2025</div></div>

# BACKLOGS

## Backlogs

^ 2 - Development		0 ▾
350	Epic: 3.3 Epic 01	New
372	User story: 3.1.1 User Story 01	New
382	Feature: 3.1.1.1 Feature 01	New
1666	Epic: 3.4 Development	New
1667	User story: 3.4.1 Core Player Features	New
1668	Feature: 3.4.1.1 Registration & Login	New
1673	Feature: 3.4.1.2 Player Profile	New
1677	Feature: 3.4.1.3 Whiz Challenge Game Mode	New
1682	User story: 3.4.2 Whiz Memory Match, Whiz Puzzle, and Badges Display	New
1683	Feature: 3.4.2.1 Whiz Memory Match Game Mode	New
1686	Feature: 3.4.2.2 Whiz Puzzle Game Mode	New
1689	Feature: 3.4.2.3 Badges Earned Display	New
1693	User story: 3.4.3 Whiz Battle, Real-Time Features, and Player Statistics	New
1694	Feature: 3.4.3.1 Whiz Battle Game Mode	New
1699	Feature: 3.4.3.2 Real-Time Features	New
1703	Feature: 3.4.3.3 Player Statistics	New
1708	User story: 3.4.4 Admin Dashboard	New
1709	Feature: 3.4.4.1 User Management	New
1712	Feature: 3.4.4.2 Content Management	New
1714	Feature: 3.4.4.3 AI Tools Integration	New
1717	Feature: 3.4.4.4 Analytics Dashboard	New