BITI 3533 – ARTIFICIAL INTELLIGENCE PROJECT MANAGEMENT

ASSIGNMENT 2

HummingBird Sdn. Bhd.

Project Title: Online Exam Face Detection (OeFD)

Team Members	Role
Nurul Aishah binti Mohd Zaini (B031910009)	Project Manager
Thanushaini A/P Poobalan (B031910159)	Human Resources
Nurul 'Izzah binti Muhammad Zawave (B031910128)	Programmer
Siti Kamariah binti Ismail (B031910052)	Finance

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OUTLINE VIEW

PROJECT TITLE: ONLINE EXAM FACE DETECTION (OeFD)

PROJECT MANAGER: NURUL AISHAH BINTI MOHD ZAINI

1. Project Initiation (Phase 1)
    1.1 Project Management
        1.1.1 Appoint Team Members
        1.1.2 Appoint Project Manager
        1.1.3 Define Business Case
    1.2 Create Project Charter
        1.2.1 Review Project Charter
    1.3 Research
        1.3.1 Gather Materials
            1.3.1.1 Identify Hardware and Software
            1.3.1.2 Identify Programming Language
            1.3.1.3 Articles and Dataset Collection
        1.3.2 Review Research Materials
    1.4 Projections
    1.5 Stakeholders
        1.5.1 Identify Stakeholders
        1.5.2 Identify Target Users
    1.6 Guidelines
        1.6.1 Guideline Review
    1.7 Initiate Project
2. Project Definition and Planning (Phase 2)

2.1 Requirements Collection

2.1.1 Interview Stakeholders

2.1.2 Functional Requirements

2.1.3 Non-Functional Requirements

2.1.4 Focus Group

2.2 Interview

2.2.1 Interview Students

2.2.2 Interview Educational Stuffs

2.3 Observation

2.3.1 Online Exam Observation

2.4 Group Decision Making

2.4.1 Define Scope

2.4.1.1 Scope Inspection

2.4.1.2 Scope Control

2.4.1.3 Variance Analysis

2.4.2 Goal Setting

2.4.3 Define Module

2.4.4 Product Analysis

2.4.4.1 Define Current Product

2.4.4.2 Define Proposed Product

2.4.4.3 Define Alternatives

2.5 Plan Schedule Management

2.5.1 Create WBS

2.5.1.1 Estimate Cost

2.6 Quality Management

2.6.1 Workshop Training

- 2.7 Communication
  - 2.7.1 Communicate with Stakeholder
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    - 2.7.2.2 Module & Task Distribution
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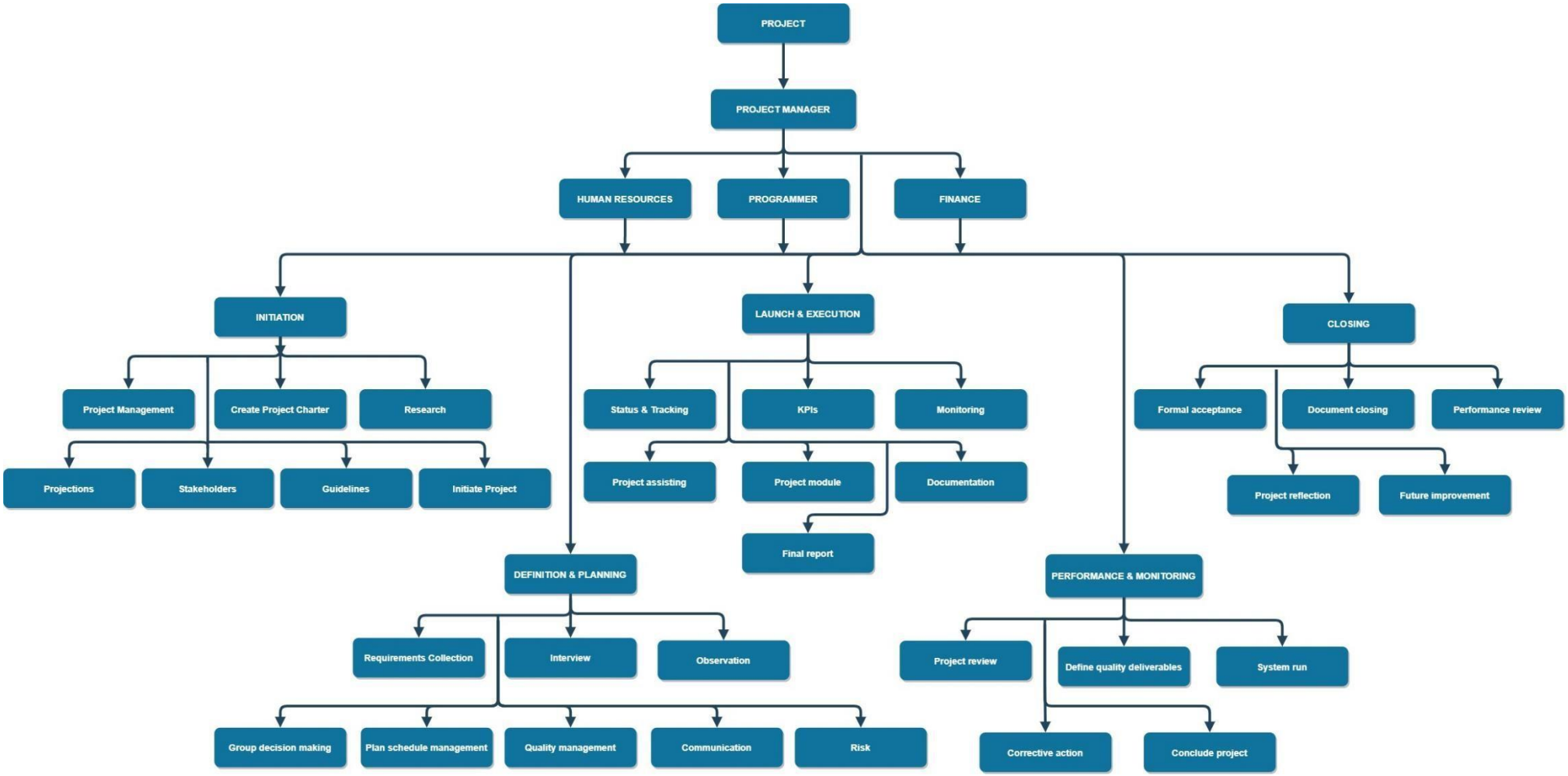
    - 2.7.3.1 Calculate NPV
- 2.8 Risk
  - 2.8.1 Define Possible Risk
  - 2.8.2 Risk Management Plan Review

3. Project Launch and Execution
   - 3.1 Status & Tracking
   - 3.2 KPIs
   - 3.3 Monitoring
     - 3.3.1 Task Progress
     - 3.3.2 Module Progress
   - 3.4 Project Assisting
     - 3.4.1 Project Process Update
   - 3.5 Project Module
     - 3.5.1 Module Integration
     - 3.5.2 Identify Integration
   - 3.6 Documentation
     - 3.6.1 Document Preparation
     - 3.6.2 Document Project
     - 3.6.3 Document Review
   - 3.7 Final Report

4. Project Performance and Monitoring (Phase 4)
    4.1 Project Review
        4.1.1 Objective
        4.1.2 Business Requirement
        4.1.3 Plan Deviation Monitoring
    4.2 Define Quality Deliverable
        4.2.1 Module Testing
        4.2.2 Module Validation
    4.3 System Run
        4.3.1 System Test
        4.3.2 System Validation
    4.4 Corrective Action
        4.4.1 Define Errors & Faults
        4.4.2 Fix Errors
    4.5 Conclude Project
        4.5.1 Project Performance
        4.5.2 Final Report Documentation
        4.5.3 Project Presentation
5. Project Closing
    5.1 Formal Acceptance
    5.2 Document Closing
    5.3 Performance Review
    5.4 Project Reflection
    5.5 Future Improvement

HIERARCHICAL STRUCTURE



TABULAR VIEW

Table below shows a tabular view of our team's WBS structure in a tabular manner, complete with task names assigned to each designated member in the team.

WBS	Task Name	Resource Names	Duration	Work	Start	Finish	Predecessors
1	**Project Initiation (Phase 1)**		12 days	6 hrs	Mon 4/10/21	Tue 19/10/21	
1.1	Project Management	All	2 days	5 hrs	Mon 4/10/21	Tue 5/10/21	
1.1.1	Appoint Team Members	Aishah	1 day	1 hr	Wed 6/10/21	Wed 6/10/21	2
1.1.2	Appoint Project Manager	All	1 day	1 hr	Thu 7/10/21	Thu 7/10/21	3
1.1.3	Define Business Case	Thanushaini	1 day	3 hrs	Fri 8/10/21	Fri 8/10/21	4
1.2	Create Project Charter	Kamariah	1 day	4 hrs	Mon 11/10/21	Mon 11/10/21	5
1.2.1	Review Project Charter	Izzah	1 day	1 hr	Tue 12/10/21	Tue 12/10/21	6
1.3	Research	All	3 days	10 hrs	Wed 13/10/21	Fri 15/10/21	7
1.3.1	Gather Materials	Kamariah	2 days	7 hrs	Mon 18/10/21	Tue 19/10/21	8

1.3.1.1	Identify Hardware and Software	Izzah	1 day	1 hr	Wed 20/10/21	Wed 20/10/21	9
1.3.1.2	Identify Programming Language	Izzah	1 day	1 hr	Thu 21/10/21	Thu 21/10/21	10
1.3.1.3	Articles and Datasets Collection	Thanushaini	1 day	5 hrs	Fri 22/10/21	Fri 22/10/21	11
1.3.2	Review Research Materials	Aishah	1 day	3 hrs	Sat 9/10/21	Sat 9/10/21	
1.4	Projections	Kamariah	1 day	4 hrs	Mon 11/10/21	Mon 11/10/21	13
1.5	Stakeholders	Izzah	1 day	3 hrs	Tue 12/10/21	Tue 12/10/21	14
1.5.1	Identify Stakeholders	Thanushaini	1 day	2 hrs	Wed 13/10/21	Wed 13/10/21	15
1.5.2	Identify Target Users	Aishah	1 day	1 hr	Thu 14/10/21	Thu 14/10/21	16
1.6	Guidelines	Kamariah	2 days	5 hrs	Fri 15/10/21	Mon 18/10/21	17
1.6.1	Guideline Review	Thanushaini	1 day	1 hr	Tue 19/10/21	Tue 19/10/21	18
1.7	Initiate Project	Izzah	2 days	6 hrs	Wed 20/10/21	Thu 21/10/21	19

2	**2.0 Project Definition & Planning (Phase 2)**		**22 days**	**1,205 hrs**	**Sat 16/10/21**	**Mon 15/11/21**	
2.1	Requirements Collection	Aishah	3 days	12 hrs	Sat 16/10/21	Tue 19/10/21	
2.1.1	Interview Stakeholder	Kamariah	2 days	2 hrs	Wed 20/10/21	Thu 21/10/21	22
2.1.2	Functional Requirements	Izzah	2 days	3 hrs	Fri 22/10/21	Mon 25/10/21	23
2.1.3	Non-Functional Requirements	Thanushaini	2 days	3 hrs	Tue 26/10/21	Wed 27/10/21	24
2.1.4	Focus Group	Aishah	2 days	4 hrs	Thu 28/10/21	Fri 29/10/21	25
2.2	Interview	Kamariah	5 days	16 hrs	Mon 1/11/21	Fri 5/11/21	26
2.2.1	Interview Students	Izzah	3 days	8 hrs	Mon 8/11/21	Wed 10/11/21	27
2.2.2	Interview Educational Staffs	Thanushaini	3 days	8 hrs	Thu 11/11/21	Mon 15/11/21	28
2.3	Observation	Aishah	5 days	60 hrs	Tue 16/11/21	Mon 22/11/21	29
2.3.1	Online Exam Observation	Kamariah	5 days	60 hrs	Tue 23/11/21	Mon 29/11/21	30

2.4	Group Decision Making	Izzah	3 days	16 hrs	Tue 30/11/21	Thu 2/12/21	31
2.4.1	Define Scope	Thanushaini	2 days	6 hrs	Fri 3/12/21	Mon 6/12/21	32
2.4.1.1	Scope Inspection	Aishah	2 days	2 hrs	Tue 7/12/21	Wed 8/12/21	33
2.4.1.2	Scope Control	Kamariah	2 days	2 hrs	Thu 9/12/21	Fri 10/12/21	34
2.4.1.3	Variance Analysis	Izzah	2 days	2 hrs	Mon 13/12/21	Tue 14/12/21	35
2.4.2	Goal Setting	Thanushaini	2 days	2 hrs	Wed 15/12/21	Thu 16/12/21	36
2.4.3	Define Module	Aishah	2 days	3 hrs	Fri 17/12/21	Mon 20/12/21	37
2.4.4	Product Analysis	Kamariah	2 days	5 hrs	Tue 21/12/21	Wed 22/12/21	38
2.4.4.1	Define Current Product	Izzah	2 days	1 hr	Thu 23/12/21	Fri 24/12/21	39
2.4.4.2	Define Proposed Product	Thanushaini	2 days	1 hr	Mon 27/12/21	Tue 28/12/21	40
2.4.4.3	Define Product Architecture	Aishah	2 days	2 hrs	Wed 29/12/21	Thu 30/12/21	41

2.4.4.4	Define Alternatives	Kamariah	2 days	1 hr	Fri 31/12/21	Mon 3/1/22	42
2.5	Plan Schedule Management	Izzah	3 days	9 hrs	Tue 4/1/22	Thu 6/1/22	43
2.5.1	Create WBS	Thanushaini	2 days	3 hrs	Fri 7/1/22	Mon 10/1/22	44
2.5.1.1	Decomposition	Aishah	2 days	2 hrs	Tue 11/1/22	Wed 12/1/22	45
2.5.1.2	Module & Task Distribution	Kamariah	2 days	1 hr	Thu 13/1/22	Fri 14/1/22	46
2.5.2	Budget	Izzah	2 days	6 hrs	Mon 17/1/22	Tue 18/1/22	47
2.5.2.1	Calculate NPV	Thanushaini	2 days	3 hrs	Wed 19/1/22	Thu 20/1/22	48
2.5.2.2	Estimate Cost	Aishah	2 days	3 hrs	Fri 21/1/22	Mon 24/1/22	49
2.6	Quality Management	Kamariah	6 days	56 hrs	Tue 25/1/22	Tue 1/2/22	50
2.6.1	Workshop Training	Izzah	6 days	56 hrs	Wed 2/2/22	Wed 9/2/22	51
2.7	Communication Management	Thanushaini	5 days	12 hrs	Thu 10/2/22	Wed 16/2/22	52
2.7.1	Communicate with Stakeholder	Aishah	3 days	4 hrs	Thu 17/2/22	Mon 21/2/22	53

2.7.2	Communicate with Development Team	Kamariah	3 days	5 hrs	Tue 22/2/22	Thu 24/2/22	54
2.7.3	Communicate with Target User	Izzah	2 days	3 hrs	Fri 25/2/22	Mon 28/2/22	55
2.8	Risk Management	Thanushaini	2 days	5 hrs	Tue 1/3/22	Wed 2/3/22	56
2.8.1	Define Possible Risk	Aishah	2 days	3 hrs	Thu 3/3/22	Fri 4/3/22	57
2.8.2	Risk Management Plan Review	Kamariah	2 days	2 hrs	Mon 7/3/22	Tue 8/3/22	58
3	**Project Launch & Execution (Phase 3)**		**35 days**	**813 hrs**	**Tue 16/11/21**	**Sat 1/1/22**	**59**
3.1	Status & Tracking	Thanushaini	27 days	10 hrs	Tue 16/11/21	Wed 22/12/21	
3.2	KPIs	Aishah	27 days	15 hrs	Thu 23/12/21	Fri 28/1/22	61
3.3	Monitoring	Kamariah	27 days	7 hrs	Mon 31/1/22	Tue 8/3/22	62
3.3.1	Task Progress	Izzah	27 days	3 hrs	Wed 9/3/22	Thu 14/4/22	63
3.3.2	Module Progress	Thanushaini	27 days	4 hrs	Fri 15/4/22	Mon 23/5/22	64

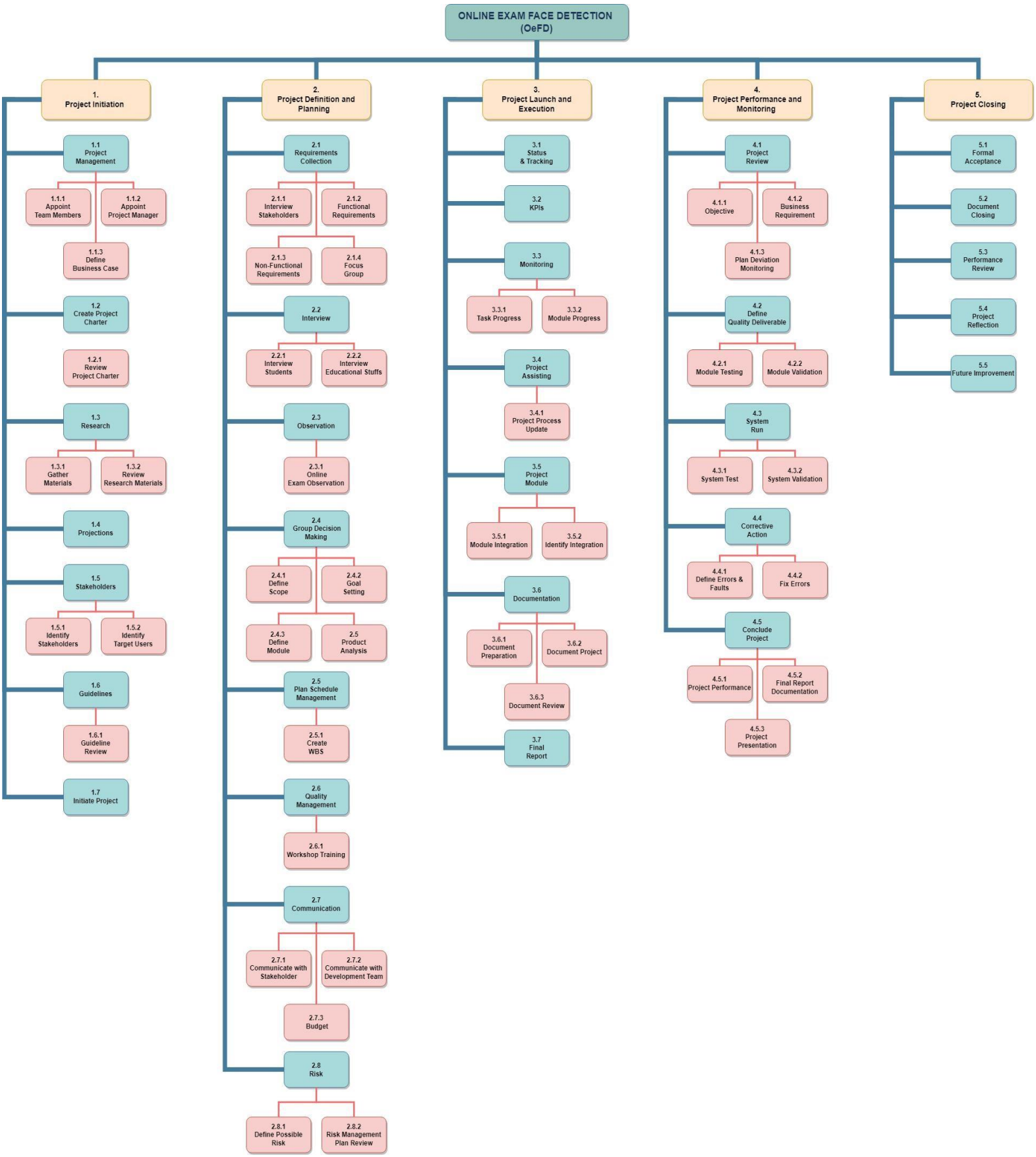
3.4	Project Assisting	Aishah	27 days	20 hrs	Tue 24/5/22	Wed 29/6/22	65
3.4.1	Project Process Update	Kamariah	27 days	20 hrs	Thu 30/6/22	Fri 5/8/22	66
3.5	Project Module Integration	Izzah	27 days	280 hrs	Mon 8/8/22	Tue 13/9/22	67
3.5.1	Module Integration	Thanushaini	27 days	265 hrs	Wed 14/9/22	Thu 20/10/22	68
3.5.2	Identify Integration Error	Aishah	27 days	15 hrs	Fri 21/10/22	Mon 28/11/22	69
3.6	Documentation	Kamariah	6 days	13 hrs	Tue 29/11/22	Tue 6/12/22	70
3.6.1	Document Preparation	Izzah	4 days	3 hrs	Wed 7/12/22	Mon 12/12/22	71
3.6.2	Document Project Progress	Thanushaini	3 days	7 hrs	Tue 13/12/22	Thu 15/12/22	72
3.6.3	Document Review	Aishah	2 days	3 hrs	Fri 16/12/22	Mon 19/12/22	73
3.7	Final Report	Kamariah	4 days	4 hrs	Tue 20/12/22	Fri 23/12/22	74

4	**Project Performance & Monitoring (Phase 4)**		**19 days**	**144 hrs**	**Sat 1/1/22**	**Wed 26/1/22**	**75**
4.1	Project Review	Izzah	3 days	6 hrs	Sat 1/1/22	Tue 4/1/22	
4.1.1	Objective Review	Thanushaini	2 days	1 hr	Wed 5/1/22	Thu 6/1/22	77
4.1.2	Business Requirements Review	Aishah	2 days	1 hr	Fri 7/1/22	Mon 10/1/22	78
4.1.3	Plan Deviation Monitoring	Kamariah	3 days	4 hrs	Tue 11/1/22	Thu 13/1/22	79
4.2	Define Quality Deliverables	Izzah	5 days	18 hrs	Fri 14/1/22	Thu 20/1/22	80
4.2.1	Module Testing	Thanushaini	5 days	12 hrs	Fri 21/1/22	Thu 27/1/22	81
4.2.2	Module Validation	Aishah	5 days	6 hrs	Fri 28/1/22	Thu 3/2/22	82
4.3	System Run	Kamariah	6 days	10 hrs	Fri 4/2/22	Fri 11/2/22	83
4.3.1	Test System	Izzah	6 days	6 hrs	Mon 14/2/22	Mon 21/2/22	84

4.3.2	Validate System	Thanushaini	6 days	4 hrs	Tue 22/2/22	Tue 1/3/22	85
4.4	Corrective Action	Aishah	6 days	18 hrs	Wed 2/3/22	Wed 9/3/22	86
4.4.1	Define Errors & Faults	Izzah	2 days	3 hrs	Thu 10/3/22	Fri 11/3/22	87
4.4.2	Error Correction	Thanushaini	5 days	15 hrs	Mon 14/3/22	Fri 18/3/22	88
4.5	Conclude Project Testing	Aishah	3 days	10 hrs	Mon 21/3/22	Wed 23/3/22	89
4.5.1	Project Performance	Kamariah	2 days	6 hrs	Thu 24/3/22	Fri 25/3/22	90
4.5.2	Final Report Documentation	Izzah	3 days	4 hrs	Mon 28/3/22	Wed 30/3/22	91
4.6	Project Presentation	Thanushaini	2 days	3 hrs	Thu 31/3/22	Fri 1/4/22	92
5	**Project Closing (Phase 5)**		**6 days**	**17 hrs**	**Wed 26/1/22**	**Wed 2/2/22**	**93**
5.1	Formal Acceptance	Aishah	4 days	7 hrs	Wed 26/1/22	Sun 30/1/22	
5.2	Document Closing	Kamariah	3 days	4 hrs	Mon 31/1/22	Wed 2/2/22	95
5.3	Performance Review	Izzah	2 days	3 hrs	Thu 3/2/22	Fri 4/2/22	96

5.3.1	Project Reflection	Thanushaini	2 days	2 hrs	Mon 7/2/22	Tue 8/2/22	97
5.3.2	Future Improvement	Aishah	2 days	1 hr	Wed 9/2/22	Thu 10/2/22	98

TREE STRUCTURAL VIEW


ONLINE EXAM FACE DETECTION (OeFD)
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2.3.1 Online Exam Observation
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2.4.2 Goal Setting
2.4.3 Define Module
2.5 Product Analysis
2.5 Plan Schedule Management
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2.6.1 Workshop Training
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5.4 Project Reflection
5.5 Future Improvement

WBS DICTIONARY

WBS	Task Name	Resource Names	Duration	Work	Start	Finish	Predecessors	Description
1	**Project Initiation (Phase 1)**		**12 days**	**6 hrs**	**Mon 4/10/21**	**Tue 19/10/21**		**Formally recognizing Online Exam Face Detection project.**
1.1	Project Management	All	2 days	5 hrs	Mon 4/10/21	Tue 5/10/21		Leading the project by appointing team members and project manager and defining business case.
1.1.1	Appoint Team Members	Aishah	1 day	1 hr	Wed 6/10/21	Wed 6/10/21	2	Four team members is appointed to be the part of the project.
1.1.2	Appoint Project Manager	All	1 day	1 hr	Thu 7/10/21	Thu 7/10/21	3	A responsible and competent team member is appointed to be the project manager to lead the work of members for the project success.
1.1.3	Define Business Case	Thanushaini	1 day	3 hrs	Fri 8/10/21	Fri 8/10/21	4	A written document with summary, problem background, business requirement, benefits and future opportunity of Online Exam Face Detection project is defined.
1.2	Create Project Charter	Kamariah	1 day	4 hrs	Mon 11/10/21	Mon 11/10/21	5	A short document that outlines high level project description and boundaries, high level requirements, high level risks and assumption and constraints.

1.2.1	Review Project Charter	Izzah	1 day	1 hr	Tue 12/10/21	Tue 12/10/21	6	The created project charter has been analyzed and evaluated by a team member.
1.3	Research	All	3 days	10 hrs	Wed 13/10/21	Fri 15/10/21	7	A systematical study is conducted to assist Online Exam Face Detection project.
1.3.1	Gather Materials	Kamariah	2 days	7 hrs	Mon 18/10/21	Tue 19/10/21	8	All materials is collected and gathered regarding Online Exam Face Detection project.
1.3.1.1	Identify Hardware and Software	Izzah	1 day	1 hr	Wed 20/10/21	Wed 20/10/21	9	All the required project software and hardware such as powerful GPU, big space of RAM, desktop computer, PyCharm software are determined.
1.3.1.2	Identify Programming Language	Izzah	1 day	1 hr	Thu 21/10/21	Thu 21/10/21	10	Python programming language is used to develop the project.
1.3.1.3	Articles and Datasets Collection	Thanushaini	1 day	5 hrs	Fri 22/10/21	Fri 22/10/21	11	All the articles about online exam and datasets of students involved in online exam is collected from different sources such as google and newspaper.
1.3.2	Review Research Materials	Aishah	1 day	3 hrs	Sat 9/10/21	Sat 9/10/21		All the research materials have been analyzed by project manager.

1.4	Projections	Kamariah	1 day	4 hrs	Mon 11/10/21	Mon 11/10/21	13	Making conjectures about future performance of the project by clarify the project priorities and apply lessons learned from other projects.
1.5	Stakeholders	Izzah	1 day	3 hrs	Tue 12/10/21	Tue 12/10/21	14	Identify all the people that interested in the Online Exam Face Detection project.
1.5.1	Identify Stakeholders	Thanushaini	1 day	2 hrs	Wed 13/10/21	Wed 13/10/21	15	Competitors, shareholders, suppliers and investors are being enlisted and managed.
1.5.2	Identify Target Users	Aishah	1 day	1 hr	Thu 14/10/21	Thu 14/10/21	16	Customers such as universities and schools that may interested in the project are identified and managed.
1.6	Guidelines	Kamariah	2 days	5 hrs	Fri 15/10/21	Mon 18/10/21	17	List out rules that must be followed in order to carry out the project successfully.
1.6.1	Guideline Review	Thanushaini	1 day	1 hr	Tue 19/10/21	Tue 19/10/21	18	The created guidelines must be analyzed and evaluated by a team member.
1.7	Initiate Project	Izzah	2 days	6 hrs	Wed 20/10/21	Thu 21/10/21	19	Putting the finishing touches and start up the Online Exam Face Detection project.
2	**2.0 Project Definition & Planning (Phase 2)**		**22 days**	**1,205 hrs**	**Sat 16/10/21**	**Mon 15/11/21**		**Establishing Online Exam Face Detection project scope and objectives, and define how to meet the objectives.**

2.1	Requirements Collection	Aishah	3 days	12 hrs	Sat 16/10/21	Tue 19/10/21		Generating and gathering list of needs and requirement either functional, system or technical from various stakeholders to meet the project objectives**.**
2.1.1	Interview Stakeholder	Kamariah	2 days	2 hrs	Wed 20/10/21	Thu 21/10/21	22	Having one-to-one conversation between shareholders, suppliers and investors to collect their needs regarding the project.
2.1.2	Functional Requirements	Izzah	2 days	3 hrs	Fri 22/10/21	Mon 25/10/21	23	Identifying the function that the project system offer such as student face authentication.
2.1.3	Non-Functional Requirements	Thanushaini	2 days	3 hrs	Tue 26/10/21	Wed 27/10/21	24	Identifying the project system security, reliability, performance, maintainability, scalability, and usability.
2.1.4	Focus Group	Aishah	2 days	4 hrs	Thu 28/10/21	Fri 29/10/21	25	Having interactive discussion to collect requirements between stakeholders and team members.
2.2	Interview	Kamariah	5 days	16 hrs	Mon 1/11/21	Fri 5/11/21	26	Face-to-face conversation to obtain information from target user.
2.2.1	Interview Students	Izzah	3 days	8 hrs	Mon 8/11/21	Wed 10/11/21	27	Collect information about the concept and understanding of online exam from students.
2.2.2	Interview Educational Staffs	Thanushaini	3 days	8 hrs	Thu 11/11/21	Mon 15/11/21	28	Collect information about the concept and understanding of online exam from educational staff.

2.3	Observation	Aishah	5 days	60 hrs	Tue 16/11/21	Mon 22/11/21	29	Closely monitor a situation to collect details and information.
2.3.1	Online Exam Observation	Kamariah	5 days	60 hrs	Tue 23/11/21	Mon 29/11/21	30	Closely monitor on how online exam are conducted and how students carried out online exam.
2.4	Group Decision Making	Izzah	3 days	16 hrs	Tue 30/11/21	Thu 2/12/21	31	Synergy and sharing of information to define the project scope and objectives.
2.4.1	Define Scope	Thanushaini	2 days	6 hrs	Fri 3/12/21	Mon 6/12/21	32	Define well detailed description about the features and functions of Online Exam Face Detection project system, and the scope of work needed to finish the project.
2.4.1.1	Scope Inspection	Aishah	2 days	2 hrs	Tue 7/12/21	Wed 8/12/21	33	Validating each deliverable by comparing with the baseline specification of the project to ensure the scope met with stakeholders needs and requirements. Involve stakeholders.
2.4.1.2	Scope Control	Kamariah	2 days	2 hrs	Thu 9/12/21	Fri 10/12/21	34	Monitor and maintain the project's baseline throughout the entire project but also to managing changes such as scope change, budget change schedule change.
2.4.1.3	Variance Analysis	Izzah	2 days	2 hrs	Mon 13/12/21	Tue 14/12/21	35	The study of deviations of actual versus planned of cost and schedule of the project.

2.4.2	Goal Setting	Thanushaini	2 days	2 hrs	Wed 15/12/21	Thu 16/12/21	36	Set up SMART goal to prepare for personal change and accomplishing project objectives.
2.4.3	Define Module	Aishah	2 days	3 hrs	Fri 17/12/21	Mon 20/12/21	37	Analyze and identify module to divide the project into discrete units of functionality.
2.4.4	Product Analysis	Kamariah	2 days	5 hrs	Tue 21/12/21	Wed 22/12/21	38	Examine Online Exam Face Detection project system features, availability, quality, appearance and other aspects.
2.4.4.1	Define Current Product	Izzah	2 days	1 hr	Thu 23/12/21	Fri 24/12/21	39	Analyzed and inspect the existing face detection system in the market to find their functionality, methods used and availability.
2.4.4.2	Define Proposed Product	Thanushaini	2 days	1 hr	Mon 27/12/21	Tue 28/12/21	40	Analyzed and define well detailed description about the Online Exam Face Detection project system functionality and methods used to develop the system.
2.4.4.3	Define Product Architecture	Aishah	2 days	2 hrs	Wed 29/12/21	Thu 30/12/21	41	Overview of the Online Exam face Detection project system architecture. Determine the frontend and backend.
2.4.4.4	Define Alternatives	Kamariah	2 days	1 hr	Fri 31/12/21	Mon 3/1/22	42	Analyzed and list out another combination of the project's costs, schedules, resources, and risks that allow achieving the same results as compared to the project baseline.

2.5	Plan Schedule Management	Izzah	3 days	9 hrs	Tue 4/1/22	Thu 6/1/22	43	Precise organization of project activities and tasks by time and cost factors.
2.5.1	Create WBS	Thanushaini	2 days	3 hrs	Fri	Mon	44	
					7/1/22	10/1/22		Develop a tabular view work-breakdown structure (WBS) that contains smaller task and time allocation for each task of the project.
2.5.1.1	Decomposition	Aishah	2 days	2 hrs	Tue 11/1/22	Wed 12/1/22	45	Breakdown the project into smaller components.
2.5.1.2	Module & Task Distribution	Kamariah	2 days	1 hr	Thu 13/1/22	Fri 14/1/22	46	Assign the small manageable components of module and task to each team members to be carried out.
2.5.2	Budget	Izzah	2 days	6 hrs	Mon 17/1/22	Tue 18/1/22	47	Determine the total funds that needed for Online Exam Face Detection project.
2.5.2.1	Calculate NPV	Thanushaini	2 days	3 hrs	Wed 19/1/22	Thu 20/1/22	48	Determine whether the anticipated financial gains of a project will outweigh the present-day investment by calculating Net Present Value (NPV).
2.5.2.2	Estimate Cost	Aishah	2 days	3 hrs	Fri 21/1/22	Mon 24/1/22	49	Forecasting the financial and other resources needed to complete a project within a defined scope which determines the project budget.

2.6	Quality Management	Kamariah	6 days	56 hrs	Tue 25/1/22	Tue 1/2/22	50	Ensure that all activities necessary to design, plan and implement the project are effective and efficient with respect to the purpose of the objective and its performance.
2.6.1	Workshop Training	Izzah	6 days	56 hrs	Wed 2/2/22	Wed 9/2/22	51	Provide training to team members regarding the skills needed to develop Online Exam Face Detection project.
2.7	Communication Management	Thanushaini	5 days	12 hrs	Thu 10/2/22	Wed 16/2/22	52	Ensure that all the deliverable are sent, received and understood by the right person.
2.7.1	Communicate with Stakeholder	Aishah	3 days	4 hrs	Thu 17/2/22	Mon 21/2/22	53	Effectively interact with shareholders, investors, suppliers to exchange information about the project.
2.7.2	Communicate with Development Team	Kamariah	3 days	5 hrs	Tue 22/2/22	Thu 24/2/22	54	Effectively interact with team members regarding the development of the project.
2.7.3	Communicate with Target User	Izzah	2 days	3 hrs	Fri 25/2/22	Mon 28/2/22	55	Effectively interact with universities and schools to exchange information about the project.
2.8	Risk Management	Thanushaini	2 days	5 hrs	Tue 1/3/22	Wed 2/3/22	56	Identify, analyze and respond to any risk that arises over the life cycle of Online Exam Face Detection project to help the project remain on track and meet its goal.

2.8.1	Define Possible Risk	Aishah	2 days	3 hrs	Thu 3/3/22	Fri 4/3/22	57	Identify all known and unknown of the project.
2.8.2	Risk Management Plan Review	Kamariah	2 days	2 hrs	Mon 7/3/22	Tue 8/3/22	58	The created risk management plan must be analyzed and evaluated by a team member.
3	**Project Launch & Execution (Phase 3)**		**35 days**	**813 hrs**	**Tue 16/11/21**	**Sat 1/1/22**		**Complete the defined work of Online Exam Face Detection Project.**
3.1	Status & Tracking	Thanushaini	27 days	10 hrs	Tue 16/11/21	Wed 22/12/21		Track the progress of tasks in the project to compare actual to planned schedule.
3.2	KPIs	Aishah	27 days	15 hrs	Thu 23/12/21	Fri 28/1/22	61	Quantifiable measures of the project to gauge and compare performance in terms of meeting their strategic and operational goals.
3.3	Monitoring	Kamariah	27 days	7 hrs	Mon 31/1/22	Tue 8/3/22	62	Keeping a close eye on the entire project management life cycle.
3.3.1	Task Progress	Izzah	27 days	3 hrs	Wed 9/3/22	Thu 14/4/22	63	Ensure project task are progressing and on the right track.
3.3.2	Module Progress	Thanushaini	27 days	4 hrs	Fri 15/4/22	Mon 23/5/22	64	Ensure project module are progressing and on the right track.

3.4	Project Assisting	Aishah	27 days	20 hrs	Tue 24/5/22	Wed 29/6/22	65	Coordinate the project by providing support and creates balance in the time and scope. Normally assist by project manager.
3.4.1	Project Process Update	Kamariah	27 days	20 hrs	Thu 30/6/22	Fri 5/8/22	66	Reviewand update the progress of the project execution.
3.5	Project Module Integration	Izzah	27 days	280 hrs	Mon 8/8/22	Tue 13/9/22	67	Each team member integrate the module that assigned to them.
3.5.1	Module Integration	Thanushaini	27 days	265 hrs	Wed 14/9/22	Thu 20/10/22	68	Each team member integrate the module that assigned to them.
3.5.2	Identify Integration Error	Aishah	27 days	15 hrs	Fri 21/10/22	Mon 28/11/22	69	Each team member analyze and identify the errors occur during the integration of the module that assigned to them.
3.6	Documentation	Kamariah	6 days	13 hrs	Tue 29/11/22	Tue 6/12/22	70	Record the key details of Online Exam Face Detection project.
3.6.1	Document Preparation	Izzah	4 days	3 hrs	Wed 7/12/22	Mon 12/12/22	71	Prepare the documents that are required to implement the project successfully.
3.6.2	Document Project Progress	Thanushaini	3 days	7 hrs	Tue 13/12/22	Thu 15/12/22	72	Record the execution progress of the project in a document.
3.6.3	Document Review	Aishah	2 days	3 hrs	Fri 16/12/22	Mon 19/12/22	73	The created document must be analyzed and evaluated by a team member.

3.7	Final Report	Kamariah	4 days	4 hrs	Tue 20/12/22	Fri 23/12/22	74	Document project successes, lessons learned and performance in order to signal improvement in project delivery for the future. Final Report reflects the formal and informal feedback collected from project stakeholders and team members throughout the project.
4	**Project Performance & Monitoring (Phase 4)**		**19 days**	**144 hrs**	**Sat 1/1/22**	**Wed 26/1/22**		**Track, review and regulate Online Exam Face Detection project progress.**
4.1	Project Review	Izzah	3 days	6 hrs	Sat 1/1/22	Tue 4/1/22		A team member will analyzed and evaluate the project to provide an independent view of status and of how the project is performing against best practice.
4.1.1	Objective Review	Thanushaini	2 days	1 hr	Wed 5/1/22	Thu 6/1/22	77	A team member will analyzed and evaluate the project to determine whether project objectives were met.
4.1.2	Business Requirements Review	Aishah	2 days	1 hr	Fri 7/1/22	Mon 10/1/22	78	A team member will analyzed and evaluate the project to determine whether project business requirements were met.
4.1.3	Plan Deviation Monitoring	Kamariah	3 days	4 hrs	Tue 11/1/22	Thu 13/1/22	79	A team member verifies whether approved change requests are implemented properly.

4.2	Define Quality Deliverable	Izzah	5 days	18 hrs	Fri 14/1/22	Thu 20/1/22	80	Defines the users' expectations for quality, the internal process and system attributes that indicate whether the quality factors are being satisfied, and the measures to be used to give visibility to the levels of quality being achieved.
4.2.1	Module Testing	Thanushaini	5 days	12 hrs	Fri 21/1/22	Thu 27/1/22	81	Test each integrated module to describe the quality of the project.
4.2.2	Module Validation	Aishah	5 days	6 hrs	Fri 28/1/22	Thu 3/2/22	82	Determine whether the module satisfies the project functionality within allowable constraints of cost and schedule and with an acceptable level of risk.
4.3	System Run	Kamariah	6 days	10 hrs	Fri 4/2/22	Fri 11/2/22	83	Integrate each module into a system.
4.3.1	Test System	Izzah	6 days	6 hrs	Mon 14/2/22	Mon 21/2/22	84	Test the integrated system to describe the quality of the project.
4.3.2	Validate System	Thanushaini	6 days	4 hrs	Tue 22/2/22	Tue 1/3/22	85	Determine whether the system satisfies the business case and scope within allowable constraints of cost and schedule and with an acceptable level of risk.
4.4	Corrective Action	Aishah	6 days	18 hrs	Wed 2/3/22	Wed 9/3/22	86	Action that is instituted, the point of which is to alter task that somehow deviated form the pre-specified task.
4.4.1	Define Errors & Faults	Izzah	2 days	3 hrs	Thu 10/3/22	Fri 11/3/22	87	Analyze and identify the system errors that causes system fail to accomplish its essential function.

4.4.2	Error Correction	Thanushaini	5 days	15 hrs	Mon 14/3/22	Fri 18/3/22	88	Rectify the identified errors and faults.
4.5	Conclude Project Testing	Aishah	3 days	10 hrs	Mon 21/3/22	Wed 23/3/22	89	Finalize project testing by analyzing and document the result of the system.
4.5.1	Project Performance	Kamariah	2 days	6 hrs	Thu 24/3/22	Fri 25/3/22	90	Evaluate the Online Exam Face Detection project performance by creating, implementing, and managing system and its functionality.
4.5.2	Final Report Documentation	Izzah	3 days	4 hrs	Mon 28/3/22	Wed 30/3/22	91	Review the implementation process of the project and presents the project's outcomes and results in the final report.
4.6	Project Presentation	Thanushaini	2 days	3 hrs	Thu 31/3/22	Fri 1/4/22	92	Present the project system to stakeholders and target users.
5	**Project Closing (Phase 5)**		**6 days**	**17 hrs**	**Wed 26/1/22**	**Wed 2/2/22**		**Formally close the Online Exam Face Detection project.**
5.1	Formal Acceptance	Aishah	4 days	7 hrs	Wed 26/1/22	Sun 30/1/22		The stakeholders have formally approve and accept the project as the project satisfies all the requirements.
5.2	Document Closing	Kamariah	3 days	4 hrs	Mon 31/1/22	Wed 2/2/22	95	All the document have been signed off, approved and archived.

5.3	Performance Review	Izzah	2 days	3 hrs	Thu 3/2/22	Fri 4/2/22	96	A team member will gauge, compare and analyzed the performance of work against the baseline of the project.
5.3.1	Project Reflection	Thanushaini	2 days	2 hrs	Mon 7/2/22	Tue 8/2/22	97	All the insights and analysis that have been obtained throughout the project work are written down.
5.3.2	Future Improvement	Aishah	2 days	1 hr	Wed 9/2/22	Thu 10/2/22	98	Important elements that can further enhance the project are being analyzed and written down.

GLOSSARY OF TERMS

Term	Definition
WBS	A deliverable-oriented breakdown of a certain project into smaller elements or sub-components
Deliverable	A kind of product, result or service produced when all of the work in
KPI	KPI stands for key performance indicator, a quantifiable measure of performance over time for a specific objective.
Risk Management	Risk management is the process of identifying, assessing and controlling threats to a project team's capital and earnings. These risks stem from a variety of sources including financial uncertainties, legal liabilities, technology issues, strategic management errors, accidents and natural disasters.
Business Case	A business case provides justification for undertaking a project, programme or portfolio. It evaluates the benefit, cost and risk of alternative options and provides a rationale for the preferred solution.
Conjectures	An opinion or conclusion formed on the basis of incomplete information.
Gauge	Estimate or determine the amount, level, or volume of.
Archive	A collection of historical documents or records providing information about a place, institution, or group of people.
Baseline	A clearly defined starting point for your project plan.
Frontend	Programming which focuses on the visual elements of a website or app that a user will interact with (the client side).
Backend	Programming which focuses on the side of a website users can't see (the server side).
Functional Requirements	A description of the service that the software must offer.
Non-Functional Requirements	System attributes such as security, reliability, performance, maintainability, scalability, and usability.