**Name:** Muhammad Bilal

**Father Name:** Haneef Qureshi

**Section:** A

**Teacher:** Dr. Shahab Ahmed Siddique

**Course:** CSSE - 313

**Program:** BSSE

**Department:** UBIT

# Lab Assignment

**Q1.** Make a Project Plan of at least 50 activities for the following types of projects: [2.5 marks each]

**a. Applying Booch Method**

**b. Applying RUP**

**c. Applying Waterfall**

**d. Applying Spiral**

Choose your own system.

**A.** I have chosen **Bank Management System** for this.

Following are the **Projects Plan** for **Bank Management System.**

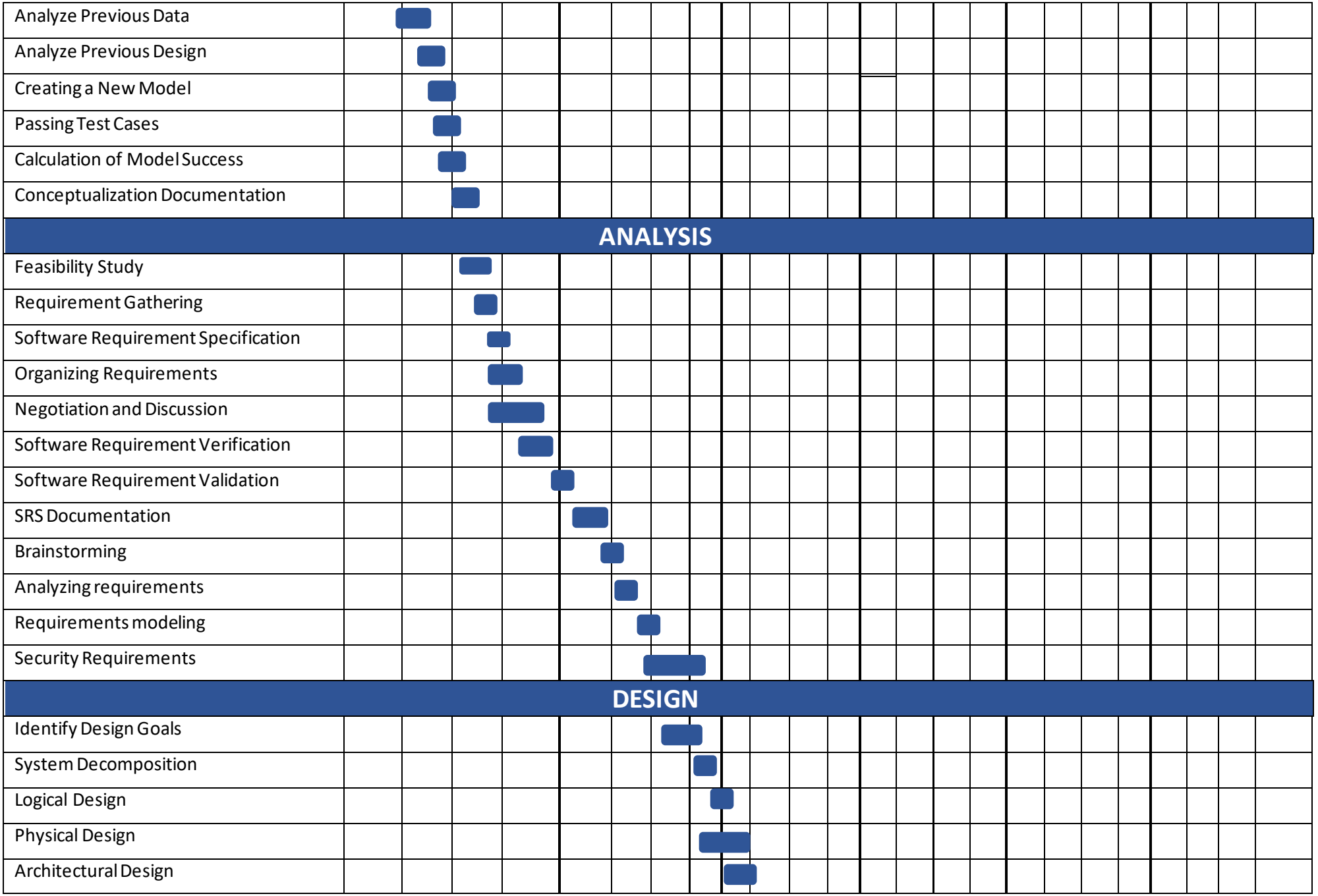
# (a)

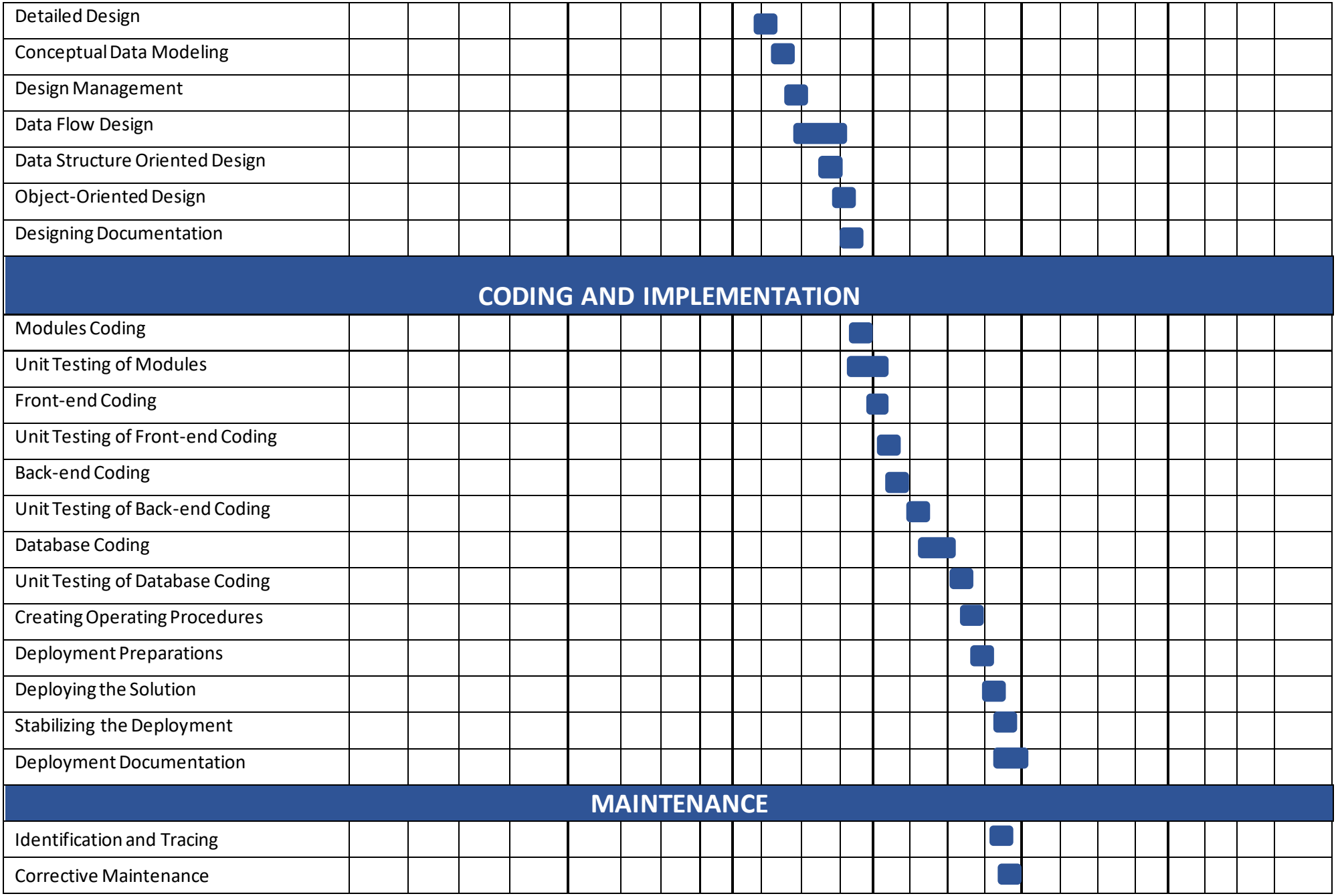
# Grady Booch Method

**Start Date : August 1st, 2020**

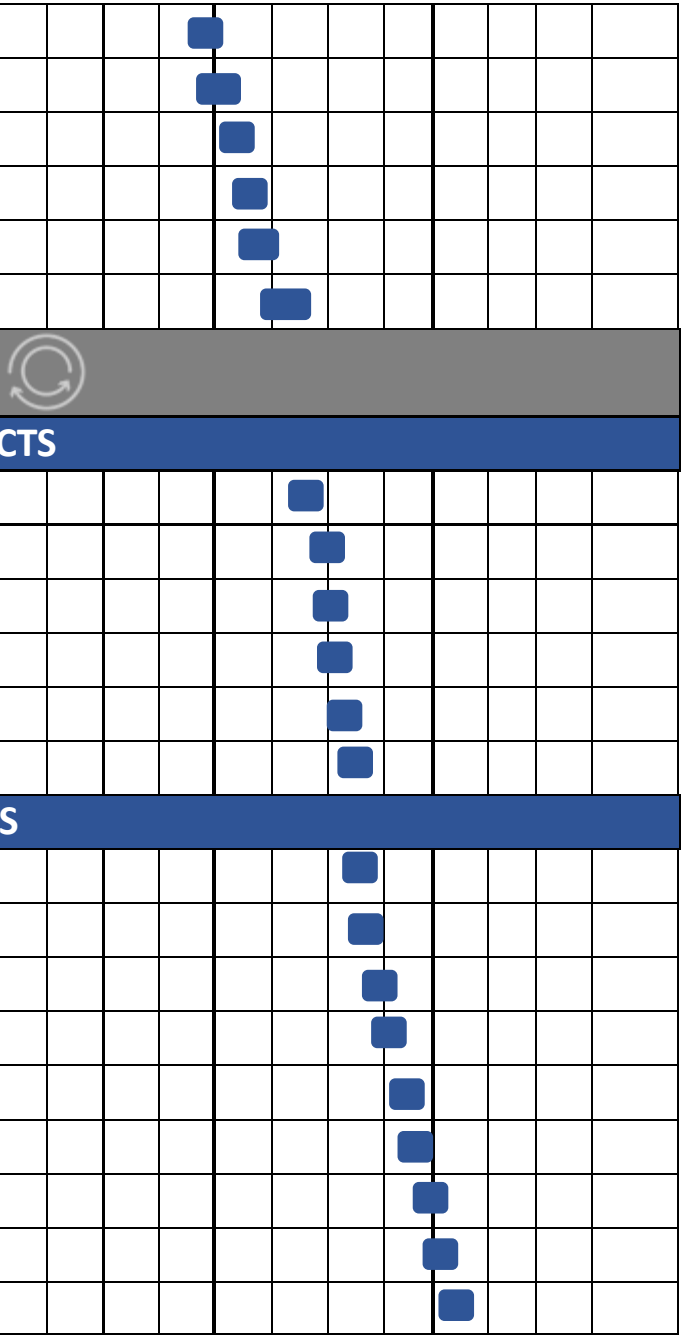
**End Date : January 31st, 2021**

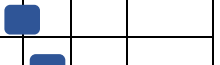
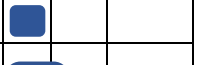
| Plan Activities | August | | | | September | | | | October | | | | November | | | | December | | | | January | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MACRO PROCESS** | | | | | | | | | | | | | | | | | | | | | | | | |
| **CONCEPTUALIZATION** | | | | | | | | | | | | | | | | | | | | | | | | |
| Market Research | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze Industrial Trends | | | | | | | | | | | | | | | | | | | | | | | | |
| Research on Predefined Models | | | | | | | | | | | | | | | | | | | | | | | | |


Analyze Previous Data
Analyze Previous Design
Creating a New Model
Passing Test Cases
Calculation of Model Success
Conceptualization Documentation
ANALYSIS
Feasibility Study
Requirement Gathering
Software Requirement Specification
Organizing Requirements
Negotiation and Discussion
Software Requirement Verification
Software Requirement Validation
SRS Documentation
Brainstorming
Analyzing requirements
Requirements modeling
Security Requirements
DESIGN
Identify Design Goals
System Decomposition
Logical Design
Physical Design
Architectural Design

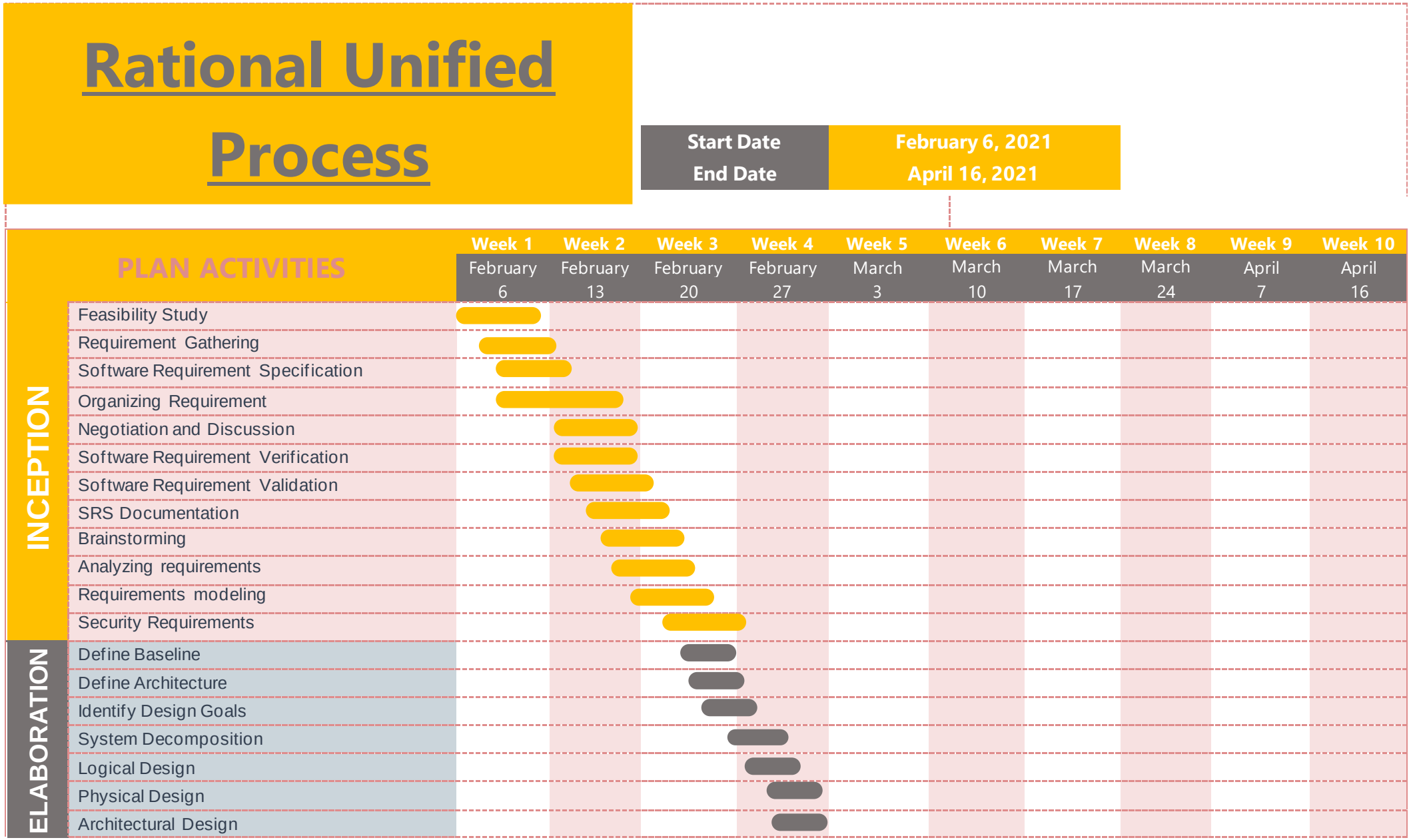

Detailed Design
Conceptual Data Modeling
Design Management
Data Flow Design
Data Structure Oriented Design
Object-Oriented Design
Designing Documentation
CODING AND IMPLEMENTATION
Modules Coding
Unit Testing of Modules
Front-end Coding
Unit Testing of Front-end Coding
Back-end Coding
Unit Testing of Back-end Coding
Database Coding
Unit Testing of Database Coding
Creating Operating Procedures
Deployment Preparations
Deploying the Solution
Stabilizing the Deployment
Deployment Documentation
MAINTENANCE
Identification and Tracing
Corrective Maintenance

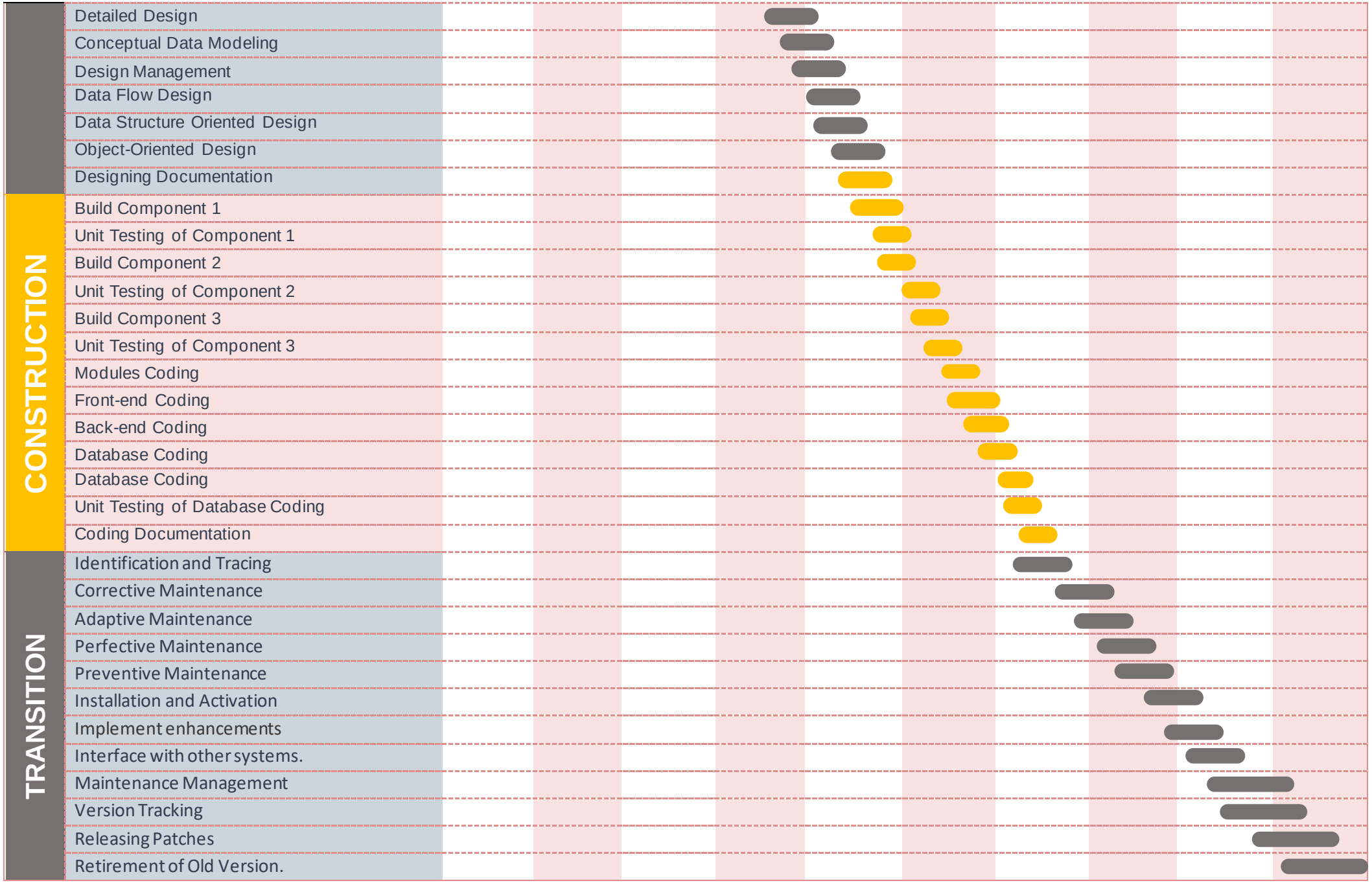
| | |
|---|---|
| Adaptive Maintenance | |
| Perfective Maintenance | |
| Preventive Maintenance | |
| Maintenance Management | |
| Version Tracking | |
| Releasing Patches | |
| **MICRO PROCESS (ITERATIVE)** | |
| **IDENTIFICATION OF CLASSES AND OBJECTS** | |
| Identify Classes | |
| Identify Objects | |
| Define Classes | |
| Define Objects | |
| Define Relation between Classes | |
| Define Relation between Objects | |
| **IDENTIFICATION OF THEIR SEMANTICS** | |
| Creation of Initial Design Classes | |
| Identify Persistent Classes | |
| Define Class Visibility | |
| Define Operations | |
| Define Methods | |
| Define States | |
| Define Attributes | |
| Define Dependencies | |
| Define Associations | |



| | |
|---|---|
| Define Generalizations |  |
| **IDENTIFICATION OF THEIR RELATIONSHIP** | |
| Identify Inheritance |  |
| Single inheritance |  |
| Multi-level inheritance |  |
| Multiple inheritance |  |
| Multipath inheritance |  |
| Hierarchical Inheritance |  |
| Hybrid Inheritance |  |
| **IDENTIFICATION OF THEIR INTERFACES AND IMPLEMENTAION** | |
| Identify Interface |  |
| Identify Abstract Classes |  |
| Define Interface |  |
| Define Abstract Classes |  |

(b)


Rational Unified Process
Start Date
February 6, 2021
End Date
April 16, 2021
PLAN ACTIVITIES
Week 1 February 6
Week 2 February 13
Week 3 February 20
Week 4 February 27
Week 5 March 3
Week 6 March 10
Week 7 March 17
Week 8 March 24
Week 9 April 7
Week 10 April 16
INCEPTION
Feasibility Study
Requirement Gathering
Software Requirement Specification
Organizing Requirement
Negotiation and Discussion
Software Requirement Verification
Software Requirement Validation
SRS Documentation
Brainstorming
Analyzing requirements
Requirements modeling
Security Requirements
ELABORATION
Define Baseline
Define Architecture
Identify Design Goals
System Decomposition
Logical Design
Physical Design
Architectural Design


Detailed Design
Conceptual Data Modeling
Design Management
Data Flow Design
Data Structure Oriented Design
Object-Oriented Design
Designing Documentation
CONSTRUCTION
Build Component 1
Unit Testing of Component 1
Build Component 2
Unit Testing of Component 2
Build Component 3
Unit Testing of Component 3
Modules Coding
Front-end Coding
Back-end Coding
Database Coding
Database Coding
Unit Testing of Database Coding
Coding Documentation
TRANSITION
Identification and Tracing
Corrective Maintenance
Adaptive Maintenance
Perfective Maintenance
Preventive Maintenance
Installation and Activation
Implement enhancements
Interface with other systems.
Maintenance Management
Version Tracking
Releasing Patches
Retirement of Old Version.

(c)

# Waterfall Project Plan

| Start Date | January 6, 2020 |
|---|---|
| End Date | March 16, 2020 |


| | PLAN ACTIVITIES | Week 1 January 6 | Week 2 January 13 | Week 3 January 20 | Week 4 January 27 | Week 5 February 3 | Week 6 February 10 | Week 7 February 17 | Week 8 February 24 | Week 9 March 7 | Week 10 March 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| REQUIREMENT GATHERING & ANALYSIS | Feasibility Study | | | | | | | | | | |
| | Requirement Gathering | | | | | | | | | | |
| | Software Requirement Specification | | | | | | | | | | |
| | Organizing Requirement | | | | | | | | | | |
| | Negotiation and Discussion | | | | | | | | | | |
| | Software Requirement Verification | | | | | | | | | | |
| | Software Requirement Validation | | | | | | | | | | |
| | SRS Documentation | | | | | | | | | | |
| SYSTEM DESIGN | Identify Design Goals | | | | | | | | | | |
| | System Decomposition | | | | | | | | | | |
| | Logical Design | | | | | | | | | | |
| | Physical Design | | | | | | | | | | |
| | Architectural Design | | | | | | | | | | |
| | Detailed Design | | | | | | | | | | |
| | Conceptual Data Modeling | | | | | | | | | | |
| | Design Management | | | | | | | | | | |
| IMPLEMENTATI | Build Component 1 | | | | | | | | | | |
| | Unit Testing of Component 1 | | | | | | | | | | |
| | Build Component 2 | | | | | | | | | | |


Unit Testing of Component 2
Modules Coding
Front-end Coding
Back-end Coding
Database Coding
Unit Testing of Each Component
INTEGRATION & TSETING
Integration of Components
Integration of Modules
Integration Testing
System Testing
Bottom-up Integration Testing
Incremental Testing
Big Bang Testing
Acceptance Testing
DEPLOYMENT OF SYSTEM
Creating Operation Procedures
Deployment Preparations
Deploying the Solution
Core Technology Deployment
Site Deployments
Stabilizing the Deployment
Transferring Ownership to Operations Team
Closing the Deploying Phase
MAINTENANCE
Identification and Tracing
Corrective Maintenance
Adaptive Maintenance
Perfective Maintenance
Preventive Maintenance
Installation and Activation
Maintenance Management
Version Tracking
Releasing Patches

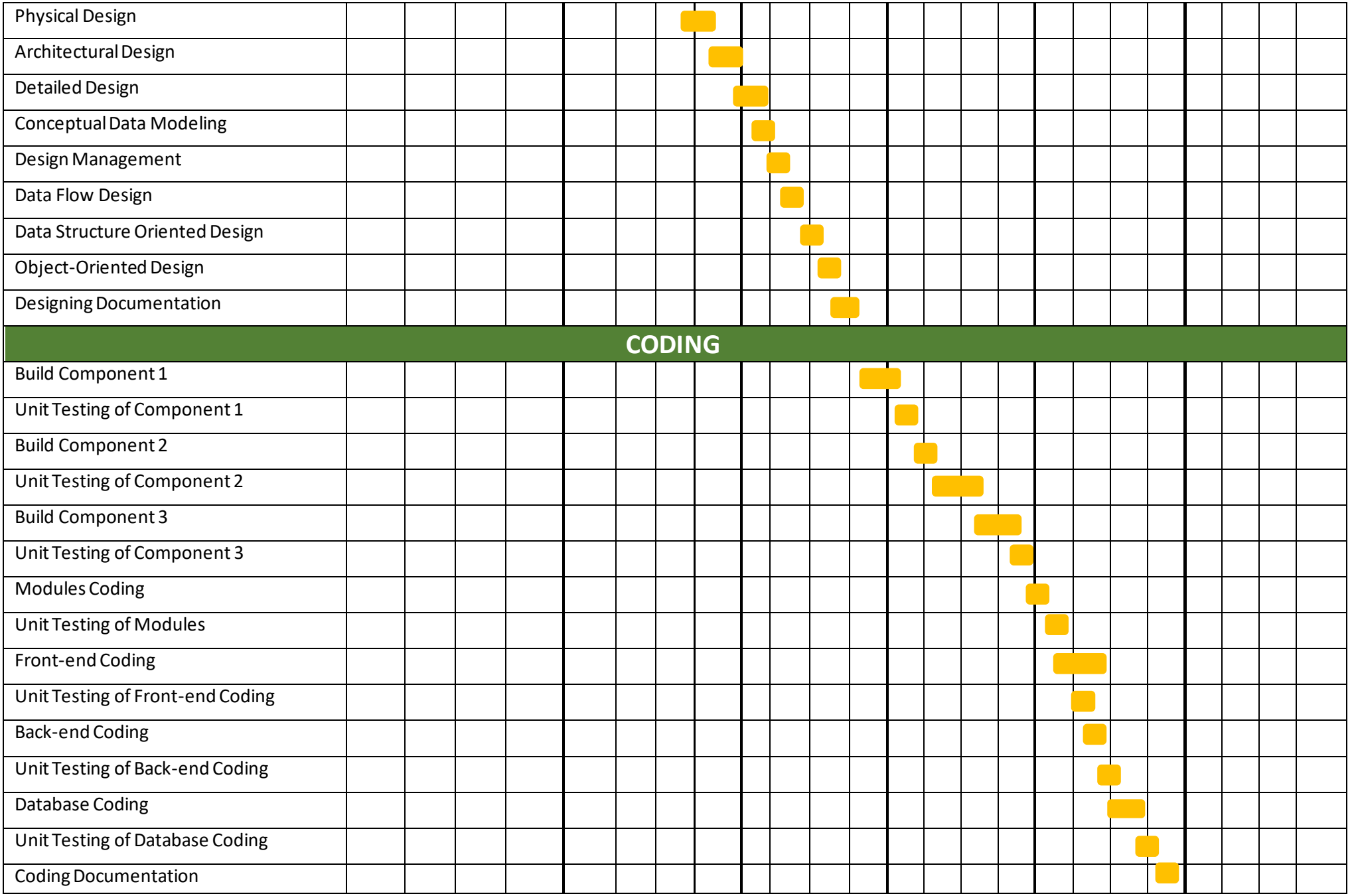
(d)

# Spiral Model (ITERATIVE)

Start Date : January 1st, 2020

End Date : Julv 31st. 2020

| Plan Activities | January | February | March | April | June | July |
|---|---|---|---|---|---|---|
| **IDENsfTIFICATION** | | | | | | |
| Feasibility Study | | | | | | |
| Requirement Gathering | | | | | | |
| Software Requirement Specification | | | | | | |
| Organizing Requirements | | | | | | |
| Negotiation and Discussion | | | | | | |
| Software Requirement Verification | | | | | | |
| Software Requirement Validation | | | | | | |
| SRS Documentation | | | | | | |
| Brainstorming | | | | | | |
| Analyzing requirements | | | | | | |
| Requirements modeling | | | | | | |
| Security Requirements | | | | | | |
| **SYSTEM DESIGN** | | | | | | |
| Identify Design Goals | | | | | | |
| System Decomposition | | | | | | |
| Logical Design | | | | | | |


Physical Design
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Detailed Design
Conceptual Data Modeling
Design Management
Data Flow Design
Data Structure Oriented Design
Object-Oriented Design
Designing Documentation
CODING
Build Component 1
Unit Testing of Component 1
Build Component 2
Unit Testing of Component 2
Build Component 3
Unit Testing of Component 3
Modules Coding
Unit Testing of Modules
Front-end Coding
Unit Testing of Front-end Coding
Back-end Coding
Unit Testing of Back-end Coding
Database Coding
Unit Testing of Database Coding
Coding Documentation

# RISK ANALYIS AND EVOLUATION