1.1

Requirement, Design, Code, Test, Maintainance, Enhancement.

1.2

Design is planning the structure and organization of the software before implementing it. "You might be tempted to restrict software engineering to mean only the beginning of the process, when you perform the application's design."

Code is writing the source code for the software "That means it's easy to make changes to any part of a program even after it is completely written."

Test is creating a test suite to make sure the code doesn't break or bug "Adding a new feature can break existing code"

Maintenance is maintain the software working by fixing bugs or defective function. "maintenance of software"

Enhancement is ongoing update to improve the software (adding or modifying features). "make modifications to meet evolving business needs"

2.4

In Google Docs, the version history appears on the right side panel, listing each version change with timestamps and the names of users who made changes. Content that was modified is highlighted in the document view, making it easy to see what changed. The platform also provides a restore feature to revert to any previous version.
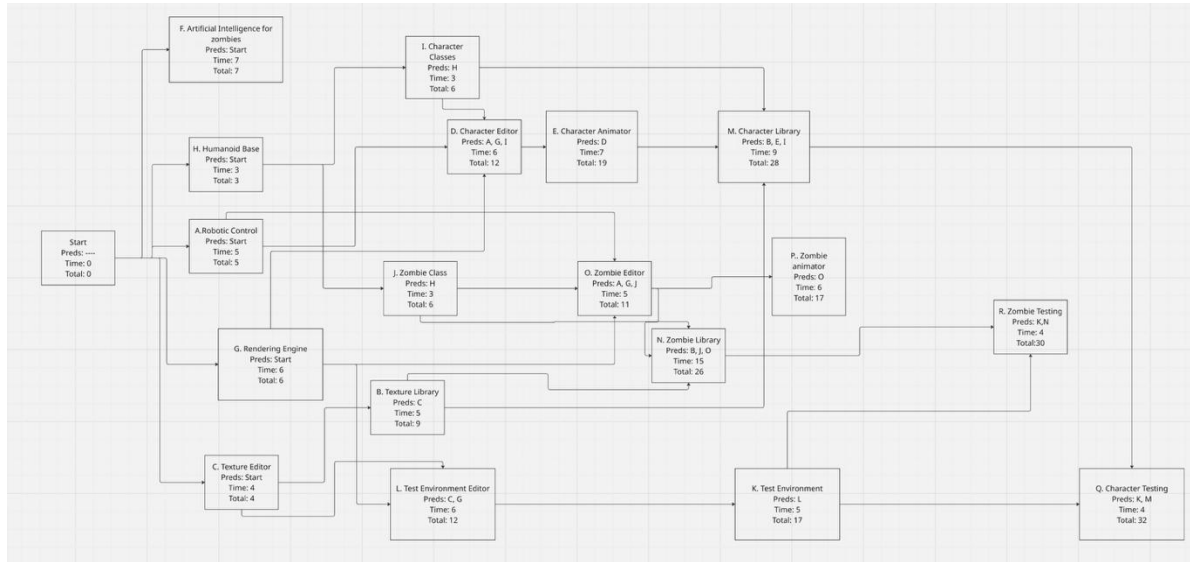
Both GitHub and Google Docs provide similar version control functions: users can view the content of each version, see who made changes, and restore previous versions. However, they differ in important ways. Google Docs automatically tracks every change in real-time, while GitHub requires developers to manually commit changes with descriptive messages. GitHub supports branching and merging for complex development workflows, whereas Google Docs maintains a simpler linear history. GitHub is optimized for code with line-by-line difference, while Google Docs uses visual highlighting better suited for text documents.

2.5

JBGE is "just barely good enough" it means providing minimum documentation and comment for the code to work and understood. It is used to avoid the time and effort to write and update documentation.

4.2

a. Critical Path Map

b. Tracing back from Q, there are 2 Critical path:

1. G -> D -> E -> M -> Q (Rendering Engine -> Character Editor -> Character Animator -> Character Library -> Character Testing)
2. H -> I -> D -> E -> M -> Q (Humanoid Base Classes -> Character Classes -> Character Editor -> Character Animator -> Character Library -> Character Testing)

c. From the critical path the expected duration of the project is 32 days.

4.6

There are some ways to handle those kind of problems like:

1. Adding some time to the schedule so that the schedule has more buffer. (placing placeholder for unexpected problems)

2. During the unexpected event place insert the lost time into the schedule and adjust the timeline.

4.8

1. Ignoring the problem and hope you can make up the time later.
2. Adding extra developer to the task and assume they can reduce the time needed to finish it. According to the book from Fred Brooks of "The Mythical Man-Month" adding more manpower to a late software project makes it later because new developers need time to get up to speed, which slows down existing developers

5.1

Clear, Unambiguous, Consistent, Prioritized, Verifiable.

5.3

User Requirements

a. Allow users to monitor uploads/downloads while away from the office.
b. Let the user specify website log-in parameters.
c. Let the user specify upload/download parameters such as retries.
d. Let the user select an Internet location, a local file, and a time.
e. Let the user schedule uploads/downloads at any time.
l. Let the user empty the log.
m. Display reports of upload/download attempts.
n. Let the user view the log reports on a remote device such as a phone.

Functional Requirements

f. Allow uploads/downloads to run at any time.
h. Run uploads/downloads sequentially.
i. If a transfer is scheduled while another is running, wait.
j. Perform scheduled uploads/downloads.
k. Keep a log of all attempted uploads/downloads and whether they succeeded.
o. Send an e-mail to an administrator if failures exceed retries.
p. Send a text message to an administrator if failures exceed retries.

Nonfunctional Requirements

g. Make uploads/downloads transfer at least 8 Mbps.

5.9

Must Have (M)

- Show blank spaces for word length
- Show correct answer when you lose
- Disable used letter buttons

Should Have (S)

- Difficulty levels (Easy, Medium, Hard)
- Word categories (animals, movies, sports, etc.)
- Hint system (one hint per game)

- Win/loss statistics
- Sound effects

Could Have (C)

- Multiplayer mode
- Daily challenge word
- Achievements/badges
- Custom word lists
- Themed graphics (pirate, space, etc.)
- Timed mode
- Share results on social media

Won't Have (W)

- Voice recognition
- Augmented reality (3D skeleton)
- AI that learns your style