1. **Which one will be your project model waterfall, incremental or reuse-oriented development (chapter 2). Explain in details and why?**

Developing systems through incremental release requires first providing essential operating functions, then providing system users with improved and more capable versions of a system at regular intervals. This model combines the classic software life cycle with iterative enhancement at the level of system development organization. This in turn accommodates the provision of standard software maintenance contracts. This approach has also been extended through the use of software prototyping tools and techniques.

**2. Write full story of your project features (for each feature) (example case “A ‘prescribing medication’ story” in chapter 3, page 21)**

Jack is a young man and also a end user.He loves using computer and he has a low-featured computer.Computer’s hard disk drive 512 gigabyte, a very low capacity these days.He uses a lot of programs and applications, so harddisk is insufficient.It should be an application that unused files should be compressed and opened whenever a new file is added.It should do direct target file compression without scanning the entire disk every time.Jack cannot use a complex system because he is a young user, so the system it uses should have a user-friendly interface.One day, Jack sees the compression application of Kompi and bought it.Jack can now easily store files and he is very happy.

For another example, a person with 120 gb or less ssd disk space, it would be a problem for windows users. SSDs make faster a pc. But if you have 20 gb ssd you cant install windows, even if you do there will be many problems. But if you using this program it will help you to get double space like approximately 40 gb.

**3. Write detailed test case of your project features (for each feature) (example case “Test case description for dose checking” in chapter 3, page 31)**

A.First of all,the application is downloaded from the website to reach the application.

B.To enter the application must be registered from the site.

C.You can use the application after purchase.

D.You can do three operations in the interface and adjust the application according to them.

E.First choice, by selecting a timing, you can select how many hours a compression will be.

F.Second choice, directly selected file is compressed.

G.Last choice,automatically compresses when new files added.

H.Test phase, all of these features were tested and worked correctly.

I.You can see all compressed files with all details from “see detail” button, and so can be tested.

J.Application can be closed at any time by only one click ,if you wanna turn off.

4.Write full requirements definition of your project (example : chapter 4 , User and system requirements page 7)

User Requirement Definition:

1. First they need internet and credit card for buy and download the application from on “Kompi” website.
2. They have to register from website to use the application.

System Requirement Definition:

A.Need to have a Windows 10 operating system update version of

at least in 2016 for use.

C. Need to at least 2 gigabytes of memory(RAM) and system speed of at least 1.8 GHz.

Write full nonfunctional requirements of your project (example : chapter **4 , Examples of nonfunctional requirements in the MHC-PMS page 18)**

**Performance Requirement:**

When new files added, automatically compresses besides compresses the newly inserted files without scanning the entire disk.So you will earn time also reduce memory consumption.

**Usability Requirement:**

“Kompi” application is user friendly and require least effort to operate.

**Portability Requirement:**

“Kompi” application is made using C#, PHP ,HTML, CSS, etc. which are platform independent and can be transported to other servers with minimum effort.

**Availability Requirement:**

Only operating system of the specified users can use the application and can't compress video files.Compression feature can be turned on and off at any time.Payment must be made through the website to use the application.

The application does not work correctly if your hardware is lower than the system requirement.

**5. Write full nonfunctional requirements of your project (example : chapter 4 , Examples of nonfunctional requirements in the MHC-PMS page 18)**

**Performance Requirement:**

The software need Windows 10 2016 build or later.

**Usability Requirement:**

Easy to use but need payment.

**Portability Requirement:**

The app needs 200 mb ram. Intel i2 3750 or higher.

**Availability Requirement:**

It need windows 10 ntfs file system to work. After payment, you can download the program and you can just open and run.

6. Fill your project nonfunctional requirements metrics table

|  |  |
| --- | --- |
| **Property** | **Measure** |
| Speed | Processed transactions/second  User/event response time  Screen refresh time |
| Size | Mbytes  Number of ROM chips |
| Ease of use | Training time  Number of help frames |
| Reliability | Mean time to failure  Probability of unavailability  Rate of failure occurrence  Availability |
| Robustness | Time to restart after failure  Percentage of events causing failure  Probability of data corruption on failure |
| Portability | Percentage of target dependent statements  Number of target systems |

7. Write full requirements of each part of your Project

The application can be made in the form of hours and hours with automatic compression. This increases the ease of use. To do this, select the specific time zones that are in our application and lean back.

Because movies are already compressed files, the compression of files such as movies is not used.

Compressing large files like games can sometimes decrease in-game performance. (Use in game files remains for user preference).

It has the ability to compress at least half of the average file size.

If the user selects a file and performs compression, the operation starts. The elapsed time, how much compression has been made, the information about it is displayed in the log records.

8. Write full structured requirements of each part of your Project

Kompi/Compression system

|  |  |
| --- | --- |
| Function | Compress files without data loss. |
| Description | Helping people with low-budget hardware by reaching the end user with this compression. |
| Inputs | Reading the size of the file to be compressed. |
| Source | Makes calculations according to selected file. |
| Outputs | CompSize- to compress the file size. |
| Destination | Ways to increase memory. |
| Action | The application can be made in the form of hours and hours with automatic compression. This increases the ease of use. To do this, select the specific time zones that are in our application and lean back. |
| Requirements | Open the account to use the app and purchase the app. Selecting compression locations or files. |
| Pre-condition | File or disk selection. |
| Post-condition | If the selected files are compressed, the resized file will be replaced. |
| Side effects | None. |

9. Write tabular computation of your each function/model of your software

|  |  |
| --- | --- |
| **Condition** | **Action** |
| Folder size falling (r2 < r1) | CompSize = 0 |
| Folder size stable (r2 = r1) | CompSize = 0 |
| Folder size decreasing and the use of cpu is increasing  ((r2 – r1) < (r1 – r0)) | CompSize = 0 |
| Folder size decreasing and rate of cpu stable or increasing ((r2 – r1) ≥ (r1 – r0)) | CompSize = round ((r2 – r1)/4)  If rounded result = 0 then  CompSize = MinimumSize |

10.Write detailed scenarios for your Project

INITIAL ASSUMPTION:

We are trying to reach end user with this compression algorithm. In order to sell this application, the user has to open the application and purchase it and install it to the computer. With this application, end user will be able to perform operations with low capacity computers

NORMAL:

The user can buy and download the application through our website. The user installs the downloaded exe file and installs it on the computer with the necessary instructions. After the user installs the application, one login panel will meet the user. The user will log in to this application with the account the user receive from our website.

The user chooses the menu option to add compression.

The user can select the file or files he wants to compress. The user can an compress selected files.

WHAT CAN GO WRONG:

The user may have problems entering the application. In such a case, they can get help from the help section on our website.

Sometimes, when the file is too large, some measurements may occur when measuring.

Some files may not be able to compress. In such cases, the application does not work and does not perform its task.

If the cpu usage rate is high in normal use, sometimes it may not perform automatic compression. (Need some cpu space for compression).

OTHER ACTIVITIES:

The user can make the account settings from the application's website outside of the application and get information about the updates from there.

SYSTEM STATE ON COMPLETION:

User is logged on. Application connects you to our database with remote connection. In this way, your login information is securely located in our databases with a remote connection.

The system log showing start and end time of the compression and the information about how compressed a file.