



Date _____
Page _____

Name: Priya Singh.

Roll No: 190120101079

Cg Id: 201904063

Section: B

Subject: Software Engineering.

L.a) What is Software engineering? Explain its application.

Software engineering is defined as a process of analyzing user requirement and then designing / building or testing software application which will satisfy those requirements.

Applications:

- System software like compiler, device drivers, editors.
- Application software : like real time manufacturing control.
- Scientific / Engineering software:
Application like based on astronomy, molecular biology etc.
- web application: web apps are moving into sophisticated computing environment that provide stand alone features.

L.d)

b)

c)

d)

e)

f)

L.C)

g)

h)



1. d) Write the advantages and disadvantages of RAD model.

Advantages.

- Flexible and adoptable to change.
- it is useful when you have to reduce the overall project risk.
- it is adoptable and flexible to change.
- Due to prototyping in nature, There is a possibility of lesser defect.

disadvantages.

- It can't be used for smaller projects.
- Not all application is compatible with RAD.
- When technical risk is high, it is not suitable.
- Requiring highly skilled designers or developers.

b) Illustrate iterative model? ex:

Explain the software process?

A Software process is the set of activities and associated outcomes that produce a software product. Software engineers mostly carry out these activities.

There are four key phases:-

Software specification;

Software development

→ Software Validation:

→ Software Evolution:

Q. e) what is waterfall model? why it is used?

→ The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in a downward fashion.

Waterfall model is used as follows:-

As an external process, the waterfall methodology focuses very little on the end users or client involved, with a focus. Its main purpose has always been to help external teams trans more more efficiently & through the phases of a project, which can work well for the software world.

2. a) what is spiral model? write its advantages?

- Spiral model is also known as nodel model because it Subsumes all other SDLC models.
- in its diagrammatic rep., it's look like a spiral with many loops.
- each loop of the spiral is called a phase of the software development process. This model has capability to handle risks.

Advantages:

- Software is produced early in the software life cycle.
- It is good for long & complete project.
- Strong Approval & documentation.
- Best developed model to follow due to risk analysis & risk handling at every phase.

2. b) what are myths in software engineering?

- One programming language is better than other.
- more people in team may faster & better development.

- Software development is linear & predictable process.
- Development should be as fast as possible.
- Adding a new feature is a piece of cake.
- The release of the product equals the end of the process.

2. b) Explain 5 of software development life cycle & advantages.

→ A software development life cycle is a continuous process, which starts from the moment, when it's made a decision to launch the project, and it ends at the end of its full removal from the exploitation. There is no one single SDLC mode. They are divided into main groups.

Advantages

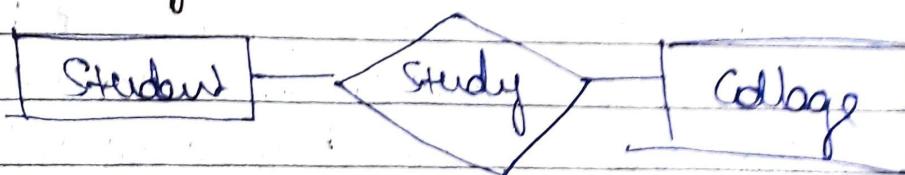
- it makes it clear what the problem or goal is. it is easy to get ahead of yourself when taking on a big project.
- without the SDLC the last of a project member can set your back and potentially ruin the project.
- The project can continuously keep around with its progress.

(Q4) Write the difference between project and product?

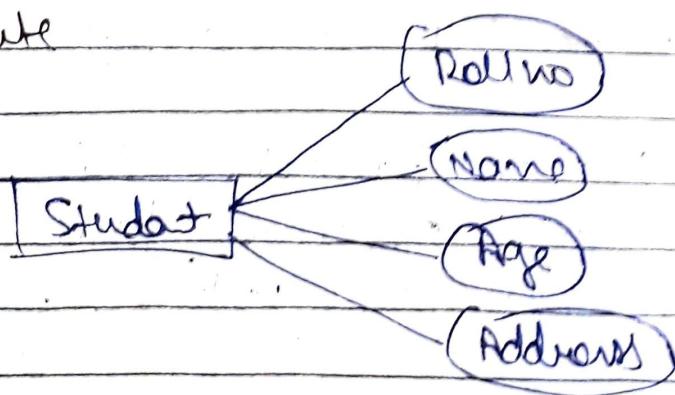
PROJECT	PRODUCT
<ul style="list-style-type: none">It comprises the steps involved in making a software before it is actually available to the market.	It is the continuation of the project for user.
<ul style="list-style-type: none">The main goal of a project is to form a new product that has not already been made.	The main goal of a product is to complete the work successfully.
<ul style="list-style-type: none">Project is undertaken to form a new software.	Product is the final production of the project.
<ul style="list-style-type: none">It focuses on increasing the performance of the software that is being built.	A product focus on the final result & the efficient with what it can solve the given problem.
<ul style="list-style-type: none">A project is done only once to get a new software.	A product can be made again & again for the purpose of distribution among user.
<ul style="list-style-type: none">It is handled by the project managers.	It is handled by the product managers.
<ul style="list-style-type: none">It exists before the software is made.	It exists after the completion of the software development phases,

- a) 3.b)** Explain ER diagram with the help of any
 1 **E-R** example related to the Software engineering.
 2 E-R dig. is a data modelling method used in Software engineering to produce a conceptual data model of an information system. Diagrams created using this E-R modelling method are Entity Relationship dig.
 E-R dig. has Three main components:

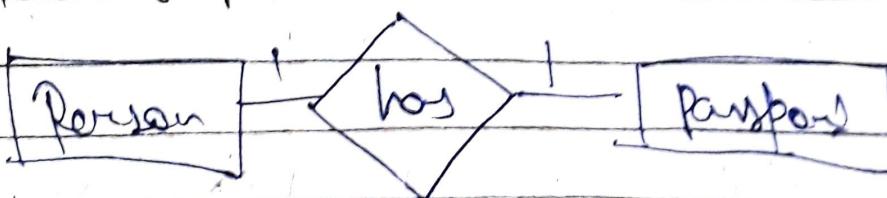
→ Entity :

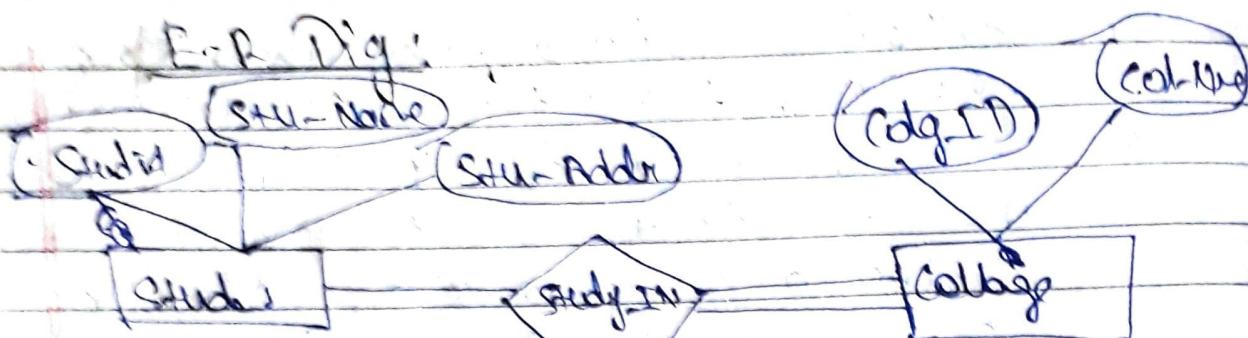


→ Attribute



→ Relationship :





4(a) Summarize Colono model with benefit over the model in software engineering.

Colono (Construction Cost Model) is a model based on LOC, it is no of lines of code. It is a procedural cost estimate model for software products & often used as an process of reliably predicting various parameters associated with making project.

The key parameter which defines quality of any software product, which are also an outcome of Colono.

→ Effort:- Amount of labour req. to complete a task.

→ Schedule:- Amount of time req. for completion of job which is proportional to effort.

5) it consist of hierarchy of successively detailed & accurate forms. These three forms can be adopted acc. to our requirement.

Types of Colcom model:-

→ Basic Colcom model,

→ Intermediate Colcom model.

→ Detailed Colcom model.

examples of Colcom model includes developing a new operating system, a database managed system & a complex inventory management system.

Profits of Colcom model

- it works on historical data & provides more accurate details.
- easy to implement with various factors one can easily understand how it works.
- easy to estimate total cost of project.
- Drivers are very helpful to understand the impact of diff. factors that affect project costs.