**Project Management Tools**

* Gantt Chart
* PERT chart
* Logic Network: shows the order of activities over time.
* Product Breakdown Structure (BBS) is a management tool and necessary a part of the project designing. It's a task-oriented system for subdividing a project into product parts.

Work Breakdown Structure is an important project deliverable that classifies the team's work into flexible segments. here are two ways to generate a Work Breakdown Structure ? The top-down and The bottom-up approach.

In the **top-down approach**, the WBS derived by crumbling the overall project into subprojects or lower-level tasks.

The **bottom-up approach** is more alike to a brainstorming exercise where team members are asked to make a list of low-level tasks which is required to complete the project.

* The resource histogram is precisely a bar chart that used for displaying the amounts of time that a resource is scheduled to be worked on over a prearranged and specific period. Resource histograms can also contain the related feature of resource availability, used for comparison on purposes of contrast.
* Critical path analysis is a technique that is used to categorize the activities which are required to complete a task, as well as classifying the time which is needed to finish each activity and the relationships between the activities. It is also called a critical path method. CPA helps in predicting whether a project will expire on time.

PERT is an acronym of Programme Evaluation Review Technique. in Project Management, PERT chart represented as a network diagram concerning the number of nodes, which represents events.

## **Differentiate between FP and LOC(in software metrics)**

|  |  |
| --- | --- |
| **FP** | **LOC** |
| 1. FP is specification based. | 1. LOC is an analogy based. |
| 2. FP is language independent. | 2. LOC is language dependent. |
| 3. FP is user-oriented. | 3. LOC is design-oriented. |
| 4. It is extendible to LOC. | 4. It is convertible to FP (backfiring) |

Scrum: A specific framework within the Agile methodology that divides work into short iterations called "sprints" and uses cross-functional teams to deliver incremental software releases.

(Android course)An **adapter** acts like a bridge between a data source and the user interface. It reads data from various data sources, coverts it into View objects and provide it to the linked Adapter view to create UI components.

It acts as a bridge between the underlying data source and the user interface elements, such as ListView, GridView, or RecyclerView. The adapter is responsible for fetching the data, creating appropriate view instances, binding the data to the views, and handling user interactions with the items.

 The data source or dataset can be an Array object, a List object etc.

 Android SDK also provides some ready-to-use adapter classes, such as ArrayAdapter,

SimpleAdapter etc

**Relative layout** is the most flexible layout in Android. It is a ViewGroup subclass, used to specify the position of child View elements relative to each other

**ConstraintLayout** is a ViewGroup subclass, used to specify the position of layout constraints for every child View relative to other views present.

 A ConstraintLayout is similar to a RelativeLayout, but having more power.**Android Web View**: It is a browser that is used to display the web pages in our activity layout.

**GridLayout:-** It is used to display items in a two dimensional, scrollable grid and grid items are automatically inserted to the gridview layout using a list

**The events** are managed by the android framework in the FIFO manner i.e. First In – First Out adapter.**in SQLite**: Queries can be created via the rawQuery() and query() methods

rawQuery(): It directly accepts an SQL select statement as input

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**A Cursor** represents the result of a query and basically points to one row of the query result. In an Android project, the commonly used folders are:

1. src: The "src" (source) folder contains the Java source code files for the application. This is where you write the logic and functionality of your Android app.
2. res: The "res" (resources) folder contains various resource files used by the application. It includes subfolders such as:
   * res/layout: Contains XML files defining the layout structure of user interface components.
   * res/values: Contains XML files defining string values, dimensions, colors, styles, and other resources.
   * res/drawable: Contains image files used in the application.
   * res/mipmap: Contains launcher icons in different densities.
   * res/menu: Contains XML files defining menu structures for the application.
3. manifest: The "manifest" folder contains the AndroidManifest.xml file. It provides essential information about the application, such as its components, permissions, intent filters, and other metadata.
4. assets: The "assets" folder is used for storing raw asset files that are not compiled but are bundled with the application. These files can be accessed at runtime using the AssetManager.
5. libs: The "libs" folder is used for storing third-party libraries or external JAR files required by the application.
6. java: The "java" folder is the default source folder for Java classes in newer Android projects. It is an alternative to the "src" folder and contains the Java packages and classes for the application.
7. jni: The "jni" folder is used for storing native code written in languages like C or C++. It is used when integrating native code into an Android application using the Java Native Interface (JNI).
8. test: The "test" folder is used for writing unit tests for the application using frameworks like JUnit.
9. build: The "build" folder is generated by the build system and contains the compiled output, intermediate files, and other build-related files. It is typically excluded from version control.

**MEI** stands for International Mobile Equipment Identity. It is a unique identifier assigned to mobile devices such as smartphones, tablets, and other cellular devices. The IMEI number is used to identify and track individual devices on a mobile network. It is a 15-digit number that is typically found in the device's settings or on the packaging of the device.

## Memory Management Unit(in os)

The purpose of Memory Management Unit (MMU) is to convert the logical address into the physical address. The logical address is the address generated by the CPU for every page while the physical address is the actual address of the frame where each page will be stored.

When a page is to be accessed by the CPU by using the logical address, the operating system needs to obtain the physical address to access that page physically.

**Quick Fit Algorithm**

The quick fit algorithm suggestsmaintaining the different lists of frequently used sizes. Although, it is not practically suggestible because the procedure takes so much time to create the different lists and then expending the holes to load a process.

* The first fit algorithm is **the best algorithm** among all because

1. It takes lesser time compare to the other algorithms.
2. It produces bigger holes that can be used to load other processes later on.
3. It is easiest to implement.

### What is a Word?

The Word is the smallest unit of the memory. It is the collection of bytes. Every operating system defines different word sizes after analyzing the n-bit address that is inputted to the decoder and the 2 ^ n memory locations that are produced from the decoder.

# Page Table in OS

Page Table is a data structure used by the virtual memory system to store the mapping between logical addresses and physical addresses.

Logical addresses are generated by the CPU for the pages of the processes therefore they are generally used by the processes.

Physical addresses are the actual frame address of the memory. They are generally used by the hardware or more specifically by RAM subsystems.

**Virtual Memory** is a storage scheme that provides user an illusion of having a very big main memory. This is done by treating a part of secondary memory as the main memory.

## Locality of reference

In operating systems, the concept of locality of reference states that, instead of loading the entire process in the main memory, OS can load only those number of pages in the main memory that are frequently accessed by the CPU and along with that, the OS can also load only those page table entries which are corresponding to those many pages.

**A Translation look aside buffer** can be defined as a memory cache which can be used to reduce the time taken to access the page table again and again.

Which one of the following activities is not carried out during the testing phase of the waterfall life cycle model?

(a)Unit testing

(b)Integration testing

(c)System testing

(d)Debugging

Which one the following is not a phase of the waterfall life cycle model?

(a)Feasibility study

(b)Project management

(c)Maintenance

(d)Requirements specification

The angular dimension of the spiral model does not represent which one of the following?

(a)Cost incurred so far

(b)Number of features implemented so far

(c)Progress in the implementation of the current feature

(d)Number of risks that have been resolved so far

The radial dimension of the spiral model represents which one of the following:

(a)Cost incurred so far

(b)Number of features implemented so far

(c)Progress in the implementation of the current feature

(d)Number of risks that have been resolved so far

Which one of the following life cycle models does not involve constructing a prototypeany time during software development?

(a)Spiral model

(b)Prototyping model

(c)RAD

(d)Evolutionary model

**Which one of the following is not a characteristic of the agile model of software development?**A. Well-demarcated phases  
B. Periodic delivery of working software  
C. Iterative development  
D. Evolutionary development

the agile model of software development does not typically have well-demarcated phases, making option A the correct answer. Agile development emphasizes periodic delivery of working software, iterative development, and evolutionary development to foster flexibility, collaboration, and continuous improvement.

Here is a comprehensive list of HTTP status codes along with their precise definitions:

1xx Informational Codes:

* 100 Continue: The server acknowledges that it has received the initial part of the request and expects the client to proceed with the rest of the request.
* 101 Switching Protocols: The server confirms that it will switch to the protocol specified in the Upgrade header of the client's request.

2xx Success Codes:

* 200 OK: The request was successful, and the server has returned the requested resource.
* 201 Created: The request has been fulfilled, and a new resource has been created as a result.
* 202 Accepted: The request has been accepted for processing, but the processing is not yet complete.
* 204 No Content: The server has successfully processed the request, but there is no content to send back.

3xx Redirection Codes:

* 300 Multiple Choices: The requested resource has multiple choices available, and the client should select one.
* 301 Moved Permanently: The requested resource has been permanently moved to a new URL.
* 302 Found: The requested resource has been temporarily moved to a different URL.
* 304 Not Modified: The client's cached copy of the requested resource is still valid, and the server has not modified it.

4xx Client Error Codes:

* 400 Bad Request: The server could not understand the client's request due to invalid syntax or other errors.
* 401 Unauthorized: The client must authenticate itself to access the requested resource.
* 403 Forbidden: The server understands the client's request, but the client is not allowed to access the requested resource.
* 404 Not Found: The requested resource could not be found on the server.

5xx Server Error Codes:

* 500 Internal Server Error: An unexpected error occurred on the server while processing the request.
* 501 Not Implemented: The server does not support the functionality required to fulfill the request.
* 502 Bad Gateway: The server acting as a gateway or proxy received an invalid response from an upstream server.
* 503 Service Unavailable: The server is temporarily unable to handle the request due to maintenance or overload.

Please note that this is not an exhaustive list, as there are additional HTTP status codes beyond these. However, these are the most commonly encountered ones that cover a wide range of scenarios.

**The Coding Phase joins the two sides of the V-Model.**

* **In server side script, since the scripts are executed on the server, the browser that displays the file does not need to support scripting at all**

**The general format of the echo statement is as follows:**

**echo outputitem1,outputitem2,outputitem3, . . .;**

**echo (output statement);**

**The parameterized version of echo does not accept multiple arguments.**

**Inclusion in set Validation**

** Is used to validate whether the value is in the set**

**$value=$\_POST['value'];**

**$set=array("M","F");**

**if(!in\_array($value,$set))**

**die("Not in the list");**