* ***Assignment-1***

***Software Testing***

* **What is software testing.**
* **The process consisting of all life cycle activities, both static and dynamic, concerned with planning, preparation and evaluation of software products and related work products to determine that they satisfy specified requirements.**
* **Test activities exist before and after test execution.**
* **Testing is a process that’s take place throughout the Software Development Life Cycle (SDLC).**
* **There are various types of testing like Unit testing Integration testing and many more…**
* **What is SDLC?**
* **SDLC stands for software development life cycle.**
* **It’s a whole process from top to bottom.**
* **Phases contains analysis design implementation testing & maintenance.**
* **SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing maintenance and support. There are a number of different development models.**
* **What is OOPS?**
* **OOPS stands for object orient programming language.**
* **It Identifying objects and assigning responsibilities to these objects.**
* **Basic concepts of OOPS**
* **Concepts of OOPS are Object Class Encapsulation Inheritance Polymorphism Overriding Overloading & Abstraction.**
* **What is class?**
* **Class is a combination of datatype Variable Method &Constructor.**
* **what are objects?**
* **The object is anything to which a concept applies.**
* **What is Inheritance?**
* **Inheritance means that one class inherits the characteristics of another class.**
* **For example Child class has a Characteristics of parent class that describes the relationship between two classes.**
* **What is Polymorphism?**
* **One things and Multiple implementations.**

1. **Method overloading-method name same but parameters different.**
2. **Method overriding-method name is same but the argument is different.**

* **What is Encapsulation?**
* **It means Data Wraping when the Data**

**Is transfers to one server to another it**

**Goes into formal pattern which is called**

**Encapsulation.**

* **What are the phases of SDLC?**

1. **It is a structure imposed on Devlopment.**

**That defines the whole process.**

1. **Requirement Gathering – it means it gather information from client, problems**

**May occur in requirement gathering**

**Like lack of clarity, Confusion, requirement amalgamation.**

1. **It defines the requirement of the system**

**We work on the project so we examine that whatever information is received is correct or suitable that we will capable to do it or not, may our budget had not increased.**

1. **Design- in this whatever we analysis it implement in real time, we make also critical priorities that in project the major problem we try to resolve and then we do performance testing in this we test the performance of the app that my site is visit by 1 person or 1000 person it works smoothly.**
2. **Implementation- In this whatever documentation we do or analysis, architecture that we do before was implement in real time .**

**This is completely a Coding phase.**

1. **Testing-testing is done after the implementation phase, testing is necessary to find bugs & errors**

**There are many types of testing unit, integration, stress, regression Ext…**

**Dull attitude in this phase may cause big problem because after this phase there is no another phase.**

1. **Maintenance- the product which was tested and deploy that was maintain in this phase, the changes happens according the client requirement do in this phase.**

* **Explain phases of Waterfall Model.**
* **Waterfall model is a sequential model that works according to SDLC model.**

**In this when 1 phase is complete then & then next phase was started, so here we can’t do parallel.**

1. **Requirement Gathering- during this phase requirement of software system**

**To be developed & gathered from client.**

1. **Design stage- in this we plan the language that what programming language we will use in this like java, PHP, Oracle, MYSQL Ext… then we also design that on what database our project is going to work.**
2. **Build stage- this is nothing but the coding the software.**
3. **Deployment- after coding we live our project on play store.**
4. **Testing- in this we do testing the software and finds the bugs.**
5. **Maintenance- once your system is ready to use you may later require change the code as per client’s requirements.**

* **Explain the phases of spiral model.**
* **Spiral model is a risk driven software development process, this model is used when the project is risky, it is a combination of waterfall model and iterative model. According to the situation we choose which model is appropriate for our project.**
* **There is a unique type of risks and we give them unique id for resolving.**

**Phases of spiral model:**

**Planning: it includes the cost of project, schedule and resources.**

**Risk analysis: identify the risk and resolve it.**

**Engineering: include coding & deploying software to customer site.**

* **Explain working methodology of agile model and also write pros & cons.**
* **Agile model is an incremental & iterative process of software development, it defines each iteration, number, duration & scope means for how many times this loop is going**
* **Agile model divides tasks into small iteration to provide specific functionality for every release.**
* **We divide we divide our project into small iteration in agile, it helps minimize the project risks & overall we deliver our project fast.**