**Software engineering Assignment**

**Module: 1**

**SE-overview of IT industry**

**Q1::What is software? What is software engineering?**

**ANS::The parts of computer that we can’t see or touch are called SOFTWARE.**

**Software is a collection of data or set of instruction.**

**That is used to operate hardware and execute specific task.**

**Software engineering ::**

**Software engineering is a technique through which we can developed or created software for computer systems and any other electronic devices.**

**In other words, software engineering is a process in which user needs are analyzed and software is design based on there needs.**

**Q-2 Explain types of software**

**There are 3 types of software.**

**1 System software**

**2 Application software**

**3 Utility software**

1. **System Software::**

**System s/w is a software designed to provide a plateform to other software.**

**System software control and manage the operations of computer hardware.**

**EX :: Operating System (Windows, Android)**

1. **Application Software**::

**The software that helps you to do a specific type of work is called application software**.

**EX:: MS word , Excel**

1. **Utility Software::**

**This software helps to manage, maintain and control computer resources EX:: Antivirus, Backup software.**

**Q 3 :: What is SDLC? Explain each phases of**

**SDLC**

**SDLC stands for Software development life cycle model. It describes the sequence of phases or steps to develop any software.**

**In simple word “entire lifetime of s/w from beginning to ending”.**

**Phases of SDLC ::**

|  |  |
| --- | --- |
| **1** | **requirements** |
| **2** | **analysis** |
| **3** | **design** |
| **4** | **implementation** |
| **5** | **Testing** |
| **6** | **Maintenance** |

**1 Requirement :**

* **Establish customer Needs**
* **Although requirements may be documented in written form, they may be incomplete, or even incorrect requirements will change.**

**2 Analysis :**

* **The analysis phase defines the requirements of the system, independent of how these requirements will be accomplished.**
* **Prepare list of requirements & prioritize requirements.**
* **This analysis represents the “WHAT” &**

**“ HOW” phase.**

**3 Design :**

* **The design team can now expand upon the information established in the requirement document.**
* **UI Designing, Database, Table etc..**

**4 Implementation :**

* **The implementation phase deals with issue of quality, performance baselines, libraries, and debugging.**
* **A system can be implemented after tested.**

**5 Testing :**

* **The testing phase is a separate phase which is performed by a different team after the implementation is complete.**
* **Simply stated, quality is very important. Many companies have not learned that quality is important and deliver more claimed functionality but a lower quality level.**

**6 Maintenance :**

* **It is the process of changing a system after it has been deployed.**

**Corrective maintenance : Identifying and repairing defects.**

**Adaptive maintenance : adapting the existing solution to the new plateform.**

**Perfective maintenance : implementing the new requirements.s**

**Q 4::What is DFD? Create a DFD Diagram on Flipkart.**

**DFD stands for “Data flow diagram ” .**

* **It is also known as “ BubbleChart ”.**
* **Through which we can represent the flow of data graphically in an information system.**
* **By using DFD we can easily understand the overall functionality of system because diagram represents the incoming data flow, outgoing data flow and stored data flow in a graphical mode.**

**Q5::What is Flowchart? Create a flowchart to make addition of two numbers.**

**Flowchart diagram showing the extract sequence of logical steps.**

* **They use geometrical shapes and arrows to show processes, relationships and data/process flow.**
* **Flowchart is a graphical representation of an algorithm.**
* **Programmers often use it is a program planning tool to solve a problem.**

**Basic Symbols used in flowchart Design.**

**1 The OVAL symbol indicates START and STOP of the program.**

**2 A parallelogram represent INPUT/OUTOUT type.**

**3 A BOX represents arithmetic instruction .This symbol mostly use a represent of process.**

**4 DIAMOND SYMBOL represent a decision point.**

**5 Whenever flowchart becomes complex or spreads over more than one page, CIRCLE symbol usefull to use connector to avoid any confusions.**

**6 Arrows represents the direction to flow of control and relationship.**

**FLOWCHART OF 2 ADDTION NUMBER::**

stop

Display sum

Sum a+b

Read num1 and num2

Num1 , num2 and sum

start