**Q14 : WRITE SDLC PHASES WITH BASIC INTRODUCTION** ?

**ANS :** System development life cycle phases include planning, system analysis, system design, development, implementation, integration and testing, and operations and maintenance.

### [Requirement Gathering and Analysis]

During this phase, all the relevant information is collected from the customer to develop a product as per their expectation. Any ambiguities must be resolved in this phase only.

**For Example,** A customer wants to have an application which involves money transactions. In this case, the requirement has to be clear like what kind of transactions will be done, how it will be done, in which currency it will be done, etc.

### [Design]

In this phase, the requirement gathered in the SRS document is used as an input and software architecture that is used for implementing system development is derived.

### [Implementation or Coding]

. Implementation/Coding starts once the developer gets the Design document

.The Software design is translated into source code. All the components of the software are implemented in this phase.

### [Testing]

.Testing starts once the coding is complete and the modules are released for testing. In this phase, the developed software is tested thoroughly and any defects found are assigned to developers to get them fixed.

. Testing is done until the point at which the software is as per the customer’s expectation. Testers refer SRS document to make sure that the software is as per the customer’s standard.

### [Deployment]

. Once the product is tested, it is deployed in the production environment or first [UAT (User Acceptance testing)](https://www.softwaretestinghelp.com/what-is-user-acceptance-testing-uat/) is done depending on the customer expectation.

.In the case of UAT, the production environment is created and the customer along with the developers does the testing.

. If the customer finds the application as expected, then sign off is provided by the customer to go live.

### [Maintenance]

### .After the deployment of a product on the production environment, maintenance of the product i.e. if any issue comes up and needs to be fixed or any enhancement is to be done is take care by the developers.

### 

### Q15 : EXPLAIN PHASES OF THE WATERFALL MODEL ?

**ANS** : Water fall is the very first model that is used in SDLC. It is also known as the linear sequential model.

.First, Requirement gathering and analysis is done. Once the requirement is freeze then only the System Design can start. Herein, the SRS document created is the output for the Requirement phase and it acts as an input for the System Design.

### 

**.**In System Design Software architecture and Design, documents which act as an input for the next phase are created i.e. Implementation and coding.

.In the testing phase, the developed code is tested roughly to detect the defects in the software.

. In the Deployment phase, the developed code is moved into production after the sign off is given by the customer.

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### https://www.softwaretestinghelp.com/wp-content/qa/uploads/2018/04/Waterfall-Model-1.jpg

**Q16 : WRITE PHASES OF SPIRAL MODEL** ?

**ANS :** Spiral model is one of the most important Software Development Life Cycle models, which provides support for Risk Handling.

.In its diagrammatic representation it looks like a spiral with many loops. The exact number of loops of the spiral is unknown and can vary from project to project.

. A spiral is a curved pattern that focuses on a center point and a series of circular shapes that revolve around it. Examples of spirals are pine cones, pineapples, hurricanes.

.Requirement analysis

.Design

.Coding

.Test and risk analysis

.

**Q17 ; WRITE AGILE MANIFESTO PRINCIPLES** ?

**ANS :** The Agile Manifesto is a document that sets out the key values and principles behind the Agile philosophy and serves to help development teams work more efficiently and sustainably.

. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

. Business people and developers must work together daily throughout the project.

.   
Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

. Working software is the primary measure of progress.

. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

. Continuous attention to technical excellence and good design enhances agility.

. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

**Q18 :** **EXPLAIN WORKING METHODOLOGY OF AGILE METHOD AND ALSO WRITE PROS AND CONS ?**

**ANS :** The Agile methodology is a way to manage a project by breaking it up into several phases.

. It involves constant collaboration with stakeholders and continuous improvement at every stage.

.Once the work begins, teams cycle through a process of planning, executing, and evaluating. Continuous collaboration is vital, both with team members and project stakeholders.

### Cons of agile methodology

  [**Transfer difficulties]**

.When switching from one management style to another for an entire department, it may take time to fully acclimate to the new responsibilities and style of how projects progress within the system.

. While agile management encourages employees to act independently toward goals, consider dividing departments into groups for the first few objectives of the project.

**[Variable goals]**

.Variable goals within a department can lead to a lack of specific goals for a team, which may lead to unknown deadlines and less accurate costs.

. Another way to unify goal costs is to set a policy regarding spending in the department so that cash flow follows a policy to reduce unforeseen spending.

**[Lack of documentation]**

. In the agile methodology system, documentation is less important than reactionary planning and progress.

.This can make documentation responsibilities such as record keeping, billing statements and plan-keeping complete more slowly in comparison to other duties.

**[Less documented improvement]**

. Because agile methodology strategies focus on reactionary improvement rather than documented improvement phases, documented success and calculated methodology strategies may be ineffective throughout the project.

. Keeping a gradual record of success and progress can help the team gain hindsight concerning objectives and next steps.

### Pros of agile methodology

**[Timely delivery]**

**.**The agile strategy allows a department to deliver products to clients as quickly as possible.

.While products and development processes may not be as optimal as possible due to lessened planning stages, the agile method allows improvement to progress through reactionary feedback.

**[Adaptability]**

**.** Since the improvement increments between product delivery dates are small, projects can easily change and adapt when underneath an agile strategy system.

. This allows production to continue at an acceptable rate while improving the process continuously.

**[Ease of collaboration]**

**.**  Agile working requires much feedback between the client and employees, agile methodology introduces a great system for collaborating between both customers and other departments.

.In an agile system, management encourages employees to think creatively to solve problems and create solutions for project challenges as they arise.

**[Increased performance improvement]**

**.** Because agile department test product increments as they produce them, department members can quickly react to problems as they may arise.

.The fragmented nature of production and correction allows agile departments to better understand and correct problems quickly.

**[Transparency]**

. With the agile approach to departmental work, both potential issues and process improvements become evident with each production cycle.

.This type of management allows employees to both correct mistakes and improve production details quickly.

**[Continuous improvement]**

.agile department strategy relies on improving a process as it produces products, improvement can directly effect the next product. Additionally, because agile strategies don't stop production to implement fixes, management encourages employees to act on feedback as soon as possible.

. A continuously improving department can become even more efficient as they sell products.

**[Higher profits]**

**.** The agile department focuses on producing a continuously improving product rather than a perfect one.

. This enables agile departments to gain profits as quickly as possible, since each product profit brings feedback back to the team.

**[Less preparatory work]**

**.** Because agile development focuses on the product more than process improvement, an agile department can produce a product more quickly than other management methods.

.By accepting feedback and making changes over time rather than stopping production to make larger changes, products can improve while not fully compromising improvement efforts.

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