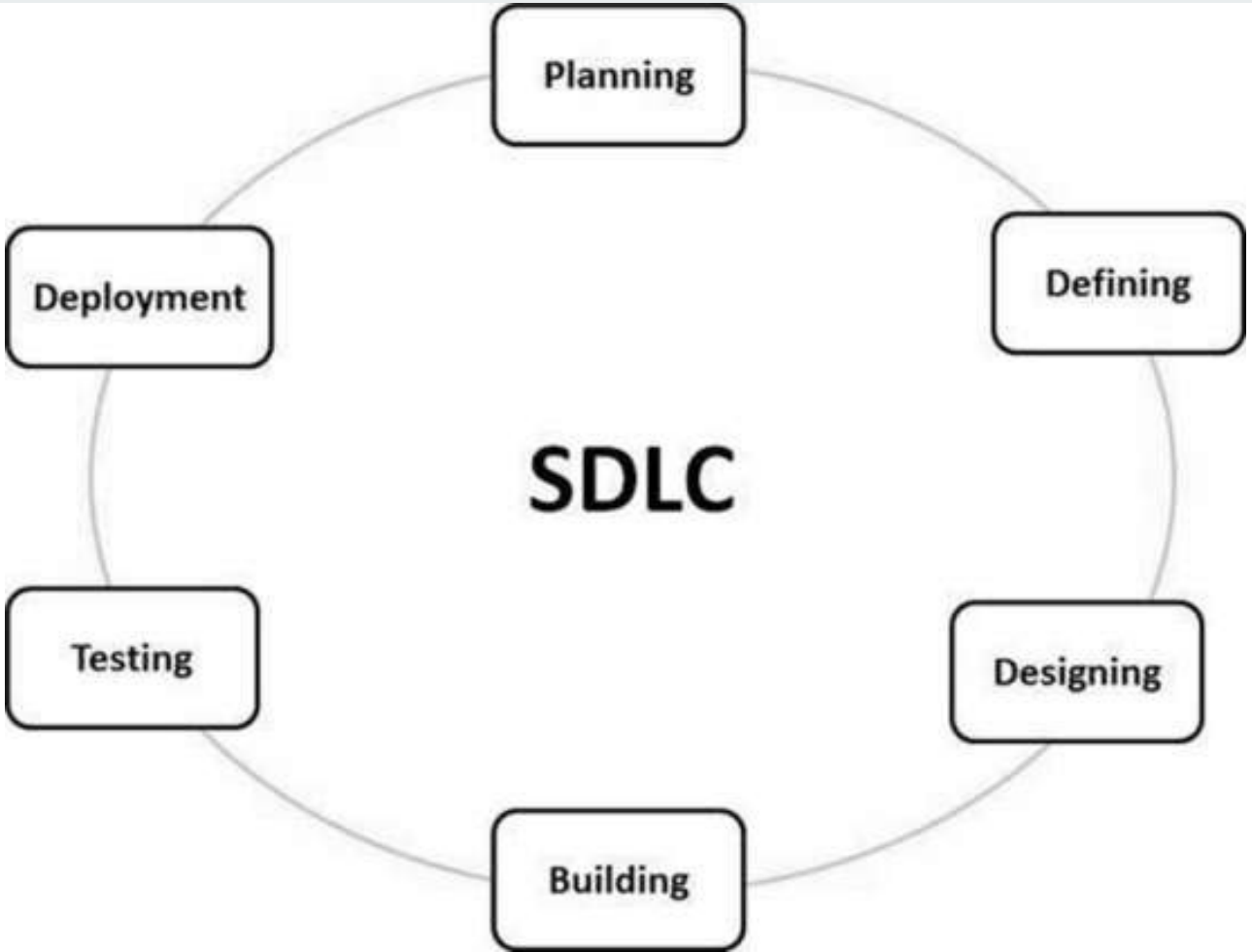
Comp5202 Testing

Introduction to Programming.

Software Development Life Cycle - SDLC

An SLDC is the process that is followed when working on a software project. It is made up of the details and information that describes the development and maintenance of the specified software. Depending on the software being developed, an SDLC is usually comprised of 6 main steps.

SDLC


Planning
Defining
Designing
Building
Testing
Deployment
SDLC

SDLC Explanation

Planning - This is first (and most important) stage where the development team meet with the customer and outline what is required, brainstorm ideas, look at market research and eventually plan an approach to achieve the desired software.

SDLC Explanation

Define - After the planning stage the next step is to clearly outline the specific requirements, usually in formal document(Software Requirement Specification or SRS), and have them approved by the customer.

SDLC Explanation

Designing- The previous SRS is the main reference for the product architecture. There is often more than one approach that can be taken, if this is the case these are outlined and passed to the management and development teams to decide on what will be best for the customers needs.

SDLC Explanation

Building - This is when the actual development of the product begins and the software is built on the agreed architecture from the previous stage. This stage will usually follow the development companies preferences of languages and ide as long as they meet the customers requirements. With all of the main planning done prior to this, the coding is usually performed rather quickly.

SDLC Explanation

Testing - This stage is usually a combination of all the prior step with the testers often being involved throughout the entire SDLC. This stage will usually follow a testing plan which will outline the steps required to ensure the final product is fault free. At this stage any defects are reported, tracked, fixed and retested to ensure the final product is fault free.

SDLC Explanation

Deployment - Once the product has successfully passed the testing stage, it is ready for market release. After the software is released the customer may receive feedback with suggested improvements by customers, these along with any required maintenance can be implemented through updates to the software.

What is a Test Plan

A testing plan is the first and foremost activity when designing and implementing any form of testing for a project. A test plan can be broken down into three main stages:

1. Initiate - This should be done at the very beginning where the tester is involved with the development team to understand the exact requirements of the customer.
2. Define - Once the software requirements are defined, the tester will work alongside the development team to understand the software being developed and begin defining the test plan according to the systems being implemented.
3. Design - When all of the required information is gathered together, the tester will design a test plan which considers scenarios that may happen and look at how the software deals with those situations.

Remember…..

Test Plan is a dynamic documen. The success of a testing project depends on a wel-written test plan document that is current at all times. Test Plan is more or less like**a blueprint of how the testing activity is going** to take place in a project.

Basic Test Plan Template

Introduction - Provide an overview of the test plan. Specify objectives, goals and any constraints.

Test Items - List the items / software to be tested and their current versions.

Test Environment - Specify the test environment noting anything that may affect the results ie. OS, hardware, network etc.

Scenario - Describe the situation in which the feature being tested and the potential issues that may occur due to this

Basic Test Plan Template

Testing Method - Outline the systems to be used during testing.

Pass / Fail Criteria - Specify the criteria that will be used to determine whether each test item (software/product) has passed or failed testing.

Modification notes - Outline any potential changes that may be required or have been implemented.

Extra Material

SDLC
https://www.tutorialspoint.com/sdlc/sdlc_overview.htm

Formal Test Plan
http://softwaretestingfundamentals.com/test_-plan/

How to write a test plan https://www.softwaretestinghelp.com/how_-to-write-test-plan-document-software-testing-training-day3/

Testing Concepts
https://www.lynda.com/course/sharerevideodirect/159186/196336?org=toiohomai.ac.nz