INDEX

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STD.: _____ DIV./SEC.: SYCM SUBJECT: SEN - Manual

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1. Write a Problem Statement to define the project title with bounded scope of project

AIM- To prepare Problem Statement For any project.

The problem Statement is initial starting point For a project. It is basically one to three page statement that describes that everyone on the project agree with that what will be done at high level. The problem Statement is intented For a broad audience and should be written in non-technical terms. It helps the technical and non-technical person to communicate by providing description of a problem. It doesn't address solution.

The project entitled Blog Management System is designes in Favor of Blog Management which helps them to save the records of student blogs and other thing. It helps them from manual work which is very difficult to manage as there are lot Of Blogs about various categories it helps to manage them. All this are managed by Admin.

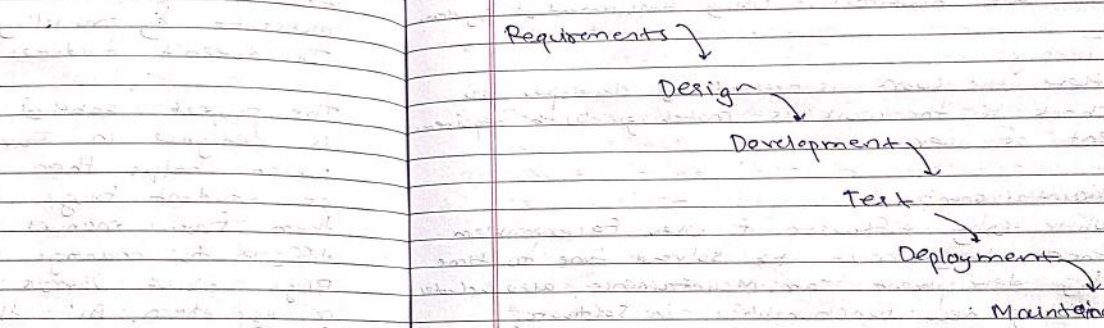
Thus the Blog Management helps to make it easier for data retrieval, storage and referencing, retrieval and to maintain the user experience as Good as Possible

2. Select Relevant Process Model to define activities and related task set for assigned Project

AIM - To select relevant model for project

Waterfall Model is first approach used in software development process. It is called as classical life cycle Model or linear sequential model. In waterfall model any phase of development process begins only if previous phase is completed.

WATERFALL MODEL -



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1] Requirement Analysis:
In this phase all business requirements of system are gathered and analyzed by communication between developer and user.

2] Design:
Based on requirement, specification design of system is created called software architecture. It is print of system representing system's internal structure and behaviour.

3] Implementation:
An implementation is coding constructed for software Architecture using Requirement of system.

4] Testing:
Here the work is tested by developer to check if the work is matching with requirement of user.

5] Maintainance:
While using software if user face problem then they must be solved time to time by development team. Maintainence also include adding new functionalities in software.

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3. Gather application specific requirement for assimilate into RE Model

AIM- Gather Functional & non-Functional requirements for project

* External Interface Requirements

1] User Interface:
The goal is to design software used for proper management of blog and automate process. The user type is listed below.
a. Students
b. Teenager
c. Anyone on Globe

Characteristics of User:

1] The user of computer-literate and have little to no difficulty using the Software keeping in mind that it is user friendly.
2] In order to use software the user must keep in mind of the internal working and expected to know how things work.
3] All guidelines of use of Software will be given to user once the user sign up for software / web page.

* Hardware Interface:

1] Computer
2] Smartphone
3] Internet / Wifi (Router)

* Software Interface:
Use database server to store & retrieve data in web browser.
Software of VS studio or basic tutorial

* Non-Functional requirement:
Non functional requirement are the Construction that must be adhered during development. eg.
1] Provide output screen after request completes.

4. Prepare Broad SRS

(Software Requirement) for above selected Project

AIM = Write SRS for Blog Management System

Purpose:
The purpose of this project is to make an automated System to carry out different operation on Blog. It helps improving reliability of data maintained & provide a Fast and efficient for user of software. Blog Management System is a user Friendly and customizable Software which provide Blog information and other services. It helps Admin to maintain Record of Blogs created.

Products Functions:

Blog Management System is an attempt to simulate Basic Management System which enables to perform following functions.

i] Creation of Blog
ii] Deletion of Blog
iii] Other Publishing Service
iv] Publishing Service.
v] Sharing Blog

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* Scope of development of Project:

The goal is to design a robust software for Management of Blog System. In this project we will fully automate the process of creation of Blog. The user can easily create and Publish Blog on the topics he love. There is no blockage to imagination. Sky is the limit for Blogging. You can delete the Blog if you want. Flexible service is the key to the successful Software. The user can also give feedback and suggestion via an appropriate form.

* Design and Implementation:

1] The developed system should run under any platform.
2] There can't be any security risk involved.
3] It should be created on Time.
4] Login ID & Password is necessary.
5] ADMIN can manage any data entered by user.

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5. Prepare User-Case and Use-case diagram using software modeling tool

AIM- Use Case diagram for Blog management service.

1] First Click on actor icon on tool palette then Click on diagram and one actor symbol, symbol appear. Repeat this to create second user.
2] Enter name of actor.
3] To add use case essentially follow the same procedure as we did for actors, Click on use case icon on palette then click within diagram.
4] Repeat to create more user.
5] To connect actor to use cases select association. Then click on actor, hold down the mouse button and drag mouse arrow to appropriate use case.
6] Complete the diagram.

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1] Geo model file tool

Containment Tree
- PROJECT
- Filter
- BMSys (model)
- Diagram
- usecase diagram
- uml Primitive type
- Supertypes

Overview
No properties for current selection

View
- Use Case diagram @ 100%
- Hand
- Package
- Actor
- Use Case
- Ext Point
- Component
- Comment link
- Association
- Generalization
- Include
- extend

Help
- D D D
- Create Actor

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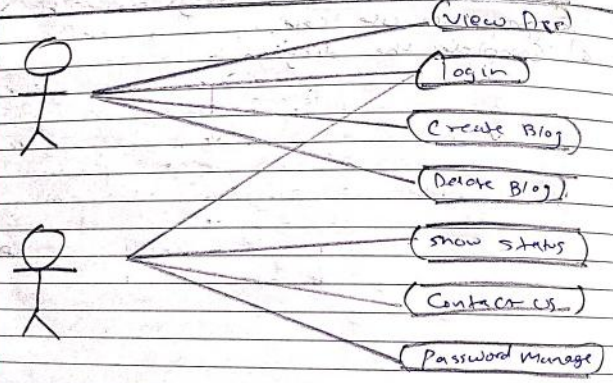

use Case diagram of BMS

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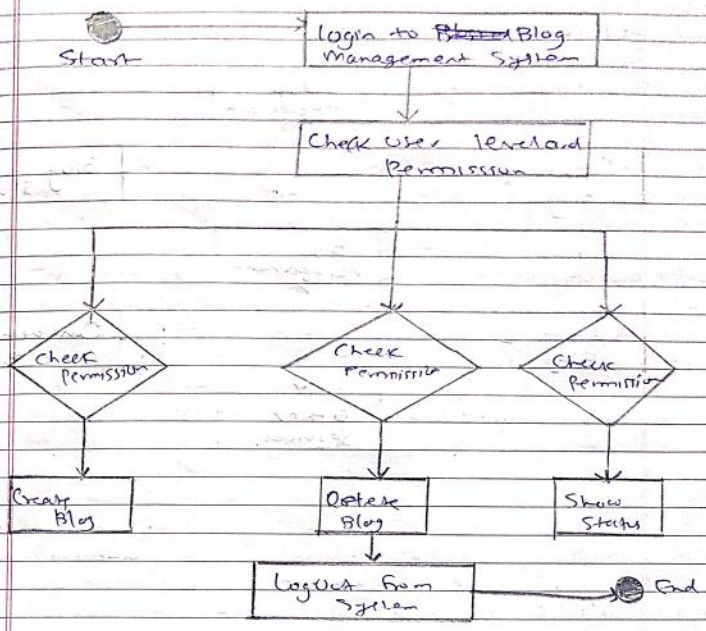
6. Develop activity diagram

to represent Flow from one activity to another for Software development

AIM- Draw Activity diagram for Blog Management



Activity diagram for Blog Management System

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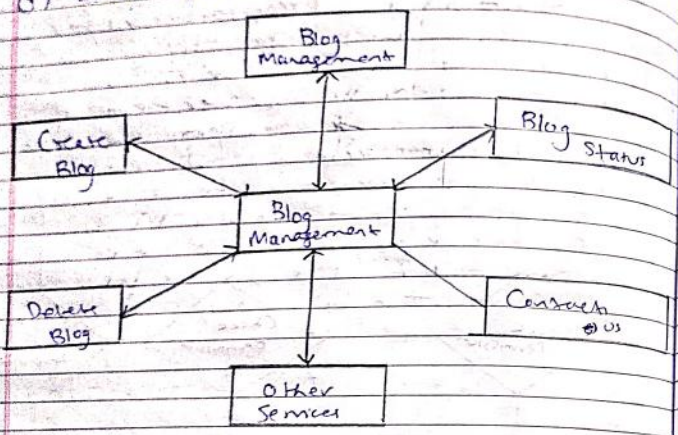
7. Develop Data Design

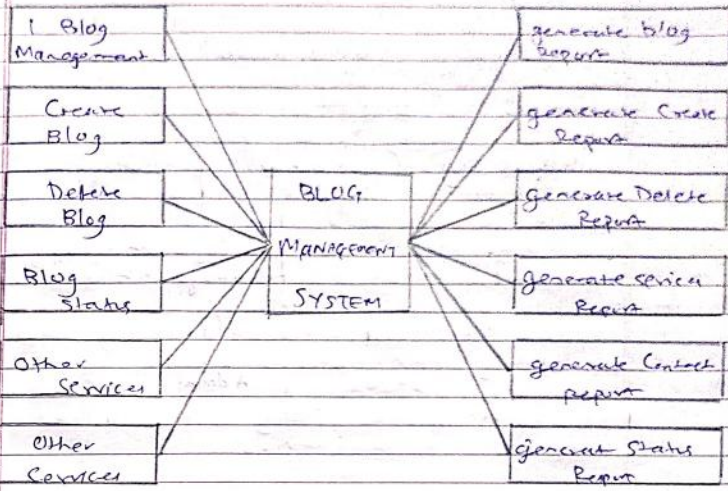
Using DFD's (Data Flow Diagram), decision table and ER entity relationship diagram

1] Data Flow Diagram (DFD) For Blog Management System

(i) Zero level DFD



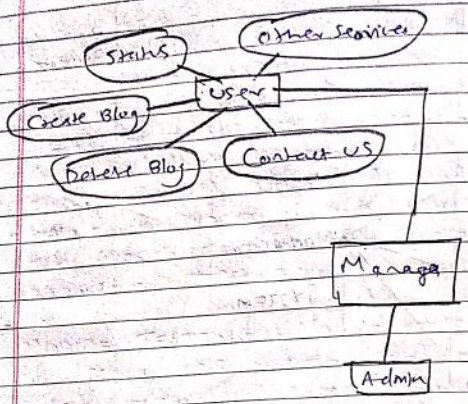
(ii) First level DFD



iii] Decision Table

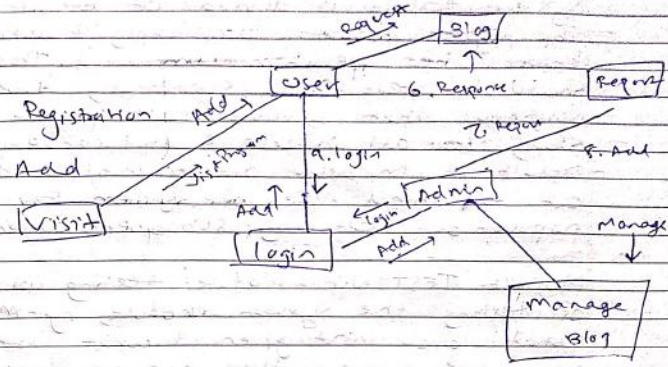
Name – Resident
Aliases – None
How used – A Resident wants to create a Blog
Description – Stores detail of all blogs inside the server

iv] FR diagram For Blog Management

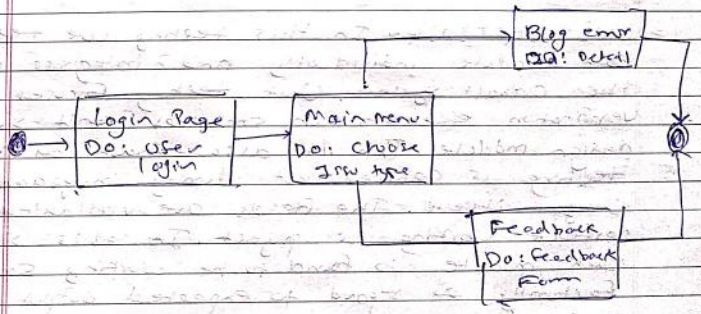


8. Draw Collaboration and State transition Diagram for Assigned Project

i] Collaboration Diagram



ii] State transition diagram



9. Write test Cases to Validate requirement of assigned project From SRS Document

System testing is aimed at ensuring that the system works accurately & efficiently before the operation commences. The System should be test Data, specifically designed to show that system will operate successfully in all aspects & produce expected result of processing are maintained throughout operational life of System for audit purpose or test any subsequent amendment.

MODULE TESTING - Module testing is a process of testing the System module by module what are input given & what are input produced & whether they are required by testing in this method

UNIT TESTING - In this testing we test each module individually and integrate with the overall system. Unit testing focuses verification effort on smallest unit software design module. This is also known as Module testing is carried out during programming stage itself. The fields are validated for perfect working of project. In this step each module is found to be working satisfactorily as regard to expected output from Module.

INTEGRATED TESTING - Data can be lost on interface One model can have an adverse effect on other function when combined may not produce the desired major function. Integration testing is systematic testing for constructing uncover error within interface. The testing was done with sample data. The developed System has run successfully for this sample data. The need for integrated is to find overall System performance.

VALIDATION TESTING - At Culmination of black box testing, Software is completely assembled as package, interfacing error have been uncovered & corrected and final series of Software test that is validation begins.

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10. Identify Risks Involved in Project and prepare RMMM (Risk Management Mitigation Monitoring)

Objective :

- Risk Mitigation is a problem according activity risk monitoring is project tracking activity Risk management is contingency plans that risk may occur.
- The goal of risk mitigation, monitoring and management plan is to identify as many potential risk as possible Risk is a potential problem, it may happen or may not happen.
- The project will then be analyzed to determination any project related task when all risk have been identified they will then be evaluated to determine their availability or occurrence plan will then be made to avoid risk

* Risk Management
- The risk management process can be divided down into two interrelated phases - risk assessment & risk control.
- The phases are further broken down. Risk assesment involves risk identification, analysis, prioritization, Risk control involves risk planning, mitigation and monitoring.

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* Procedure

1) Risk Mitigation - Related to risk planning through risk mitigation the team develop strategies to reduce the possibility or the loss impact of risk. Risk Mitigation produces a situation in which risk item are resolved.

2) Risk avoidance - When a lose-lose strategy is likely, team can opt to eliminate the risk is one example of a risk avoidance strategy is team is not to develop a product or a particularly risky feature

3) Risk protection - The organization can buy the insurance to cover any financial loss should risk become a reality. A team can employ fault tolerance strategies such as parallel processor to provide reliable insurance

4) Risk Monitoring - After risk after identified analyzed & prioritized and actions are established. It is essential that team must regularly monitor progress of project and resolution of risk items, taking corrective action when necessary.

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11. Evaluate Size of Project using function point metric for assigned project

Function point analysis -
The number and type of functions supported by software and utilized to find (FP)
The steps in function point analysis are
- Count number of function of proposed type
- Compute the unadjusted function point
- Find Total degree of influence
- Find value Adjustment Factor
- Find function point count.

Count the number of functions of each proposed type

1] External Input - Information entering System
2] External Output - Information leaving System
3] Internal logical File - Information held within
4] External inquiries - Request for information access to information.
5] External interface files - Information held by other system that is used by system being analyzed

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The weighting factor of each type based on complexity is as follows.

Functional Unit	Weighting Factor		
	Low	Average	High
External Inputs	3	4	6
External Outputs	4	5	7
External Inquiries	3	4	6
External logic Files	7	10	15
External interface files	5	7	10

The 14 general characteristics are :- Data Communication, Distributed, Processing, Performance, Heavily used configuration, Transaction rate, ON-Line data entry, End user efficiency, online Update Complex, Processing Reusability Installation ease, Operational ease, Multiple site & Facilitate change each of above is evaluated on scale 0-5.

Compute VAF = (TDI x 0.0001) + 0.65

Find FPC = UFP * VAF

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12. Estimate Cost of Project using COCOMO COCOMO-II approach. For assigned Project

The Estimate Covered under strategic plan and Feasibility study based on top down & button up approach. The estimation breaks the project into its relevant task components. The plan exhaustive investigates the SLOC & LOCs for each identified step and then will consider other Resources.

Cost Estimation For each activity will be performed by multiplying amount of work expected from daily rate for resources connected to activity. The total estimated amount calculated For multiple resources used in single task.

Staff Resources - the staffing resources are important group of programmer, management & analyst documentation

Computer Resource - The Computer Resources are important evaluation For estimation included terminal, disk space & CEV is out of scope.

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The Cost of table Includes:

1] Requirement Analysis - Develop System architecture interview, define & develop Software requirement define interface requirement, prioritize and integrate requirement, System security analysis, software quality & risk analysis, create SRS.

2] System Designing - Perform architectural design, design interface, develop algorithm. Design a test cases, Perform detailed design, create Software design Specification.

3] Coding - Create test data, Create Source data, generate object code plan integration, perform integration, document program model.

4] Testing - Develop testing requirement, unit testing, Component testing, System testing, provide Feedback to programmer.

5] Operation & maintanence - Final Checks & verification, documentation & user manual training, distribute software, install Software perform adaptive maintainence, perform preactive maintainance.

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13. Use CPM (Critical Path Method) / PERT (Programme Evaluation and Review Techniques) for scheduling assigned Project.

The task performed using CPM to visualize the project or network followed by Start & End.

	Task Name	Duration	Predecessor
1	Requirement Analysis	64 days	
2	Develop System Architecture	20 days	
3	Interview	12 days	
4	Define and develop SRS	14 days	5
5	Define interface required	14 days	4
6	Prioritize integrate	11 days	3
7	System Security Analysis	22 days	6
8	Software quality & Risk Analysis	14 days	
9	Create SRS	67 days	7,8
10	System Designing	67 day	
11	Perform Architectural Designing	21 days	9
12	Develop interface	21 days	10
13	Develop Algorithm	12 days	12
14	Design Test case	12 days	13
15	Perform detailed design	8 days	14
16	Create Software design Specification	24 days	13
17	Coding	41 days	
18	Create test data	19 days	17
19	Create Source Code	19 days	17
20	Generate Algorithm	30 days	15,17,16
21	Plan integration	7 days	20,21,19
22	Perform integration	9 days	22
23	Document Program model	10 days	22
24	Testing	60 days	
25	Develop Test Requirement	24 days	24,23
26	Unit testing	14 days	26
27	Component Testing	22 days	26
28	System testing	13 days	27
29	Provide Feedback to Programmer	14 days	28
30	Operation & Maintanence	30 days	
31	Final check & verification	28 days	30,29
32	Documentation & User Manual	17 days	30
33	Training	8 days	30
34	Distribute Software	5 days	32,33,34
35	Install Software	12 days	32
36	Perform Adaptive maintenance	9 days	35,36
37	Perform Preventive Maintainence	1 day	37

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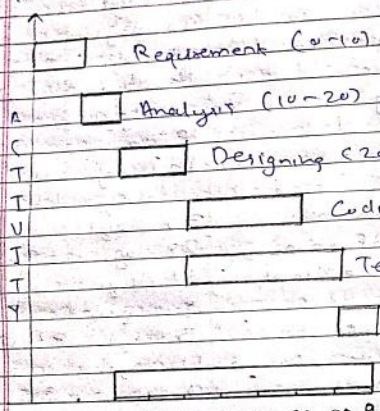
14. Use timeline chart/ Gantt chart to track Project Progress

I have decided Gantt Project schedule to track the efficiency and control of project. Here we have used Gantt chart for our project scheduling.



Timeline Chart BMS

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15. Prepare SQA plan that Facilitates Vary Attribute of quality of Project

In SQA plan test Manager must be Performing Following Steps:

STEPS:

1. Recognize role & responsibilities of SQA team
2. Make list of work product SQA Auditors with review & make audit
3. Create Schedule to do SQA Work.

1.1. Step 1: Recognize role & responsibilities of member of SQA team

In team of project every associate must have responsibility to do qualitive work. Each person from project team is set of people who perform important work of project. By performing QA we can successfully develop a qualitive software product. So the test manager must give clear information to SQA team member about their responsibility in software project through SQA plans as follows:

- Review & Analyze: The quality of development processes to check product Complex QA or not
- Communicate with management board member and member of project team to evaluate requirement and also conduct project review and status meeting.

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- Create the path in which project is developed & group the metrics to examine project quality.
- Measure - the quality of product & the ensure project meets customer expectation

1.2 Record name of all work related product that the SQA auditor will review & audit
The test manager must be
- Make list of each & every product of all test management Procedures
- Define which Facilitates or device can be used by SQA Auditors to do the SQA activities like evaluation of procedure & Audit.

1.3 Generate Schedule to do SQA Activities

Step 2 - Describe standard/technique
- To review Management task in opposition to standard procedure we must perform below steps.

(i) Describe policies & processes used in order to avoid occurrence of defects in management Process
(ii) Perform documentation of policies & procedures
(iii) Give training to staff to use it

Step 3: Review the process
Review Project activities are performed to test the compliance with described management procedure In Management review, SQA team have to do Following 5 steps:

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1. Plan the review
2. Review Software requirement Analysis
3. Review test design
4. Review before release
5. Review Project closing

SQA Plan -
Software Quality Assurance Plan contains process mechanism and tools which are used to give assurance about the product to fulfill the requirement stated in Software requirement Specification

Following Software phases of SDLC are covered by SQA Plan are,

- Software Requirement Gathering
- Low level design of System
- Implementation
- Testing
- Creating user Manual

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16. Prepare SQA Plan that Facilitates various attributes of quality of Product

In SQA Plan test Manager must perform following step

Steps to create SQA Plans

Recognize the role & responsibilities of SQA Team

Make list of work product that SQA auditor will review & Audit

Create schedule to do SQA Task

1
Step1 Recognize the role of & responsibilities of SQA Team
Step2 Record names of all work product that the SQA auditor will review & audit
Steps 3 Generate Schedule to do SQA activities

2. Describe the standard / techniques

3. Review the process

- SQA Plan

Software Quality Assurance Plan contain processes, mechanism tool which are used to give assurance which FULFIL the requirement stated in SRS

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- Works of SQA Plan are

- Recognize the task of project description
- Make list of action, procedure & work products that (how) will be reviewed & audited
- Recognize the work products

- SQA Standards

There is set of standards defined by SQA which should be applied to software development process

- Standard For Product
- Structure of requirement
- Standard commitment header from object class definition
- Coding Standard that define how a programming language should be used.