



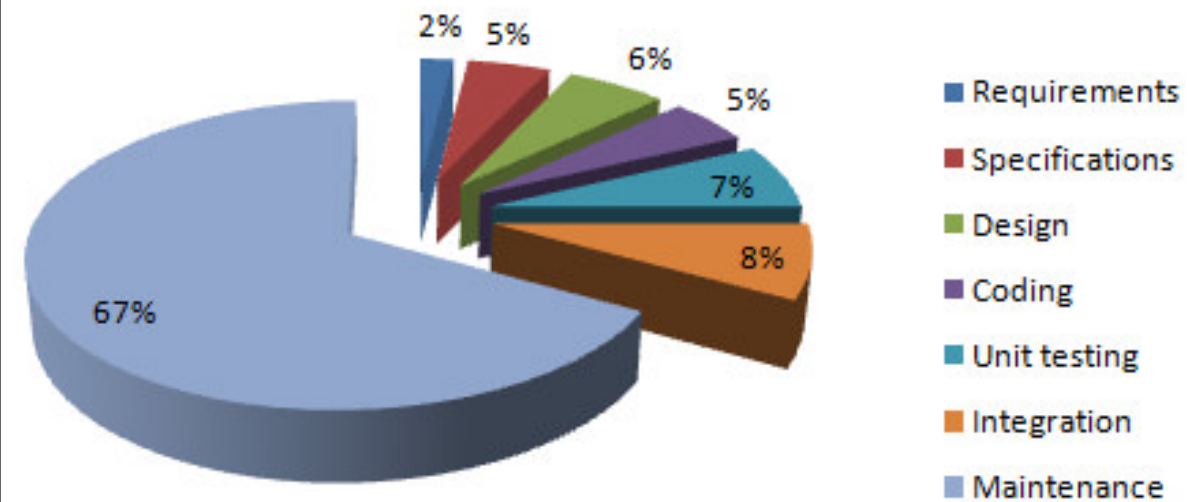
# WEEK 1: FOUNDATION (BA AND AGILE)

(18/08/2023)

**By-**  
**Vanshika Gupta (Batch-6)**



Software Life-Cycle Costs



A common mistake people make concerning software is assuming that the majority of software development is programming.



Out of all these processes, maintenance dominates the cost of the life cycle.

*Since maintenance costs are so important, many developers are beginning to use design approaches that result in software which is easier to maintain.*

# Contents

## Topics Covered



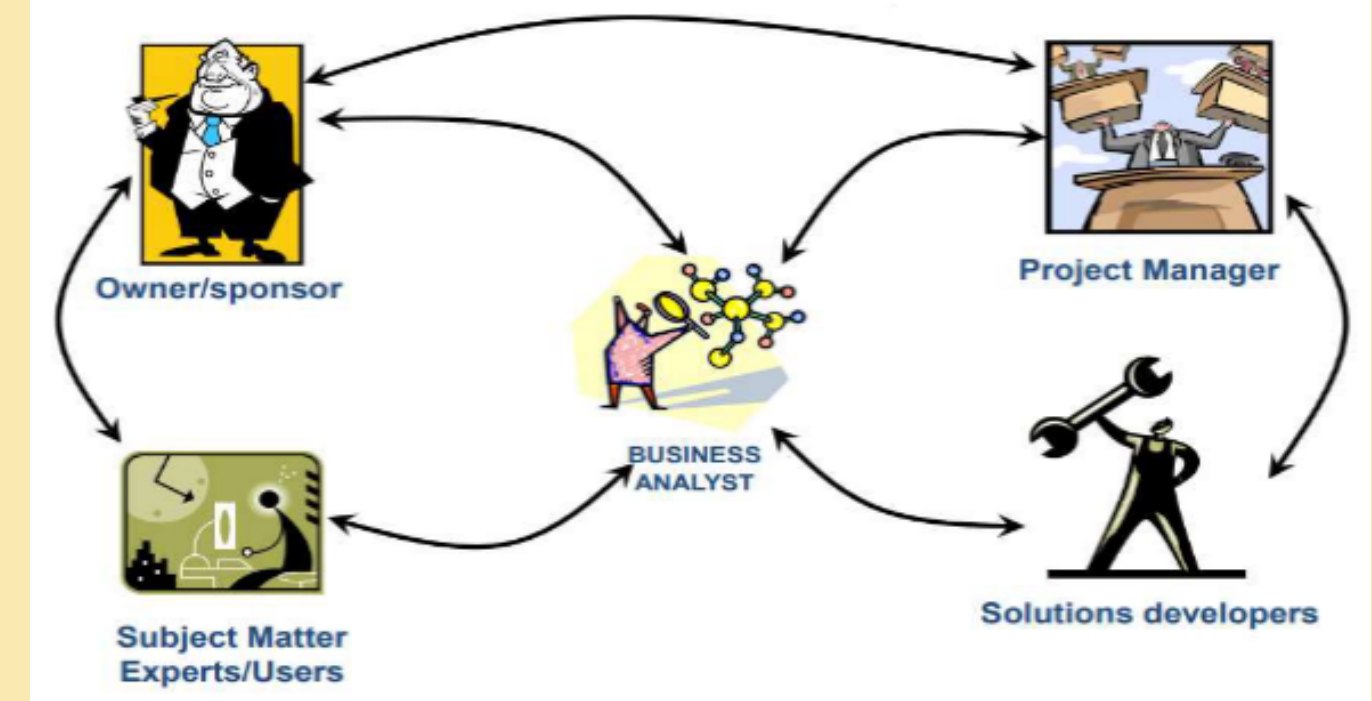
- What is Business Analysis?
- Types of requirements
- Requirement Traceability
- SDLC Models
- Agile Practices and sprint

# What is Business Analysis?



- Business analysis is the practice of enabling change in an organizational context, by defining needs and recommending solutions that deliver value to stakeholders.
- It is the discipline of:
  - (i) Identifying business needs.
  - (ii) Gathering requirements.
  - (iii) Analysing the requirements.
  - (iv) Documenting the requirements.

## Putting the business analyst in context



**Basically, they help guide businesses in improving processes, products, services and software through data analysis.**

# Types of software requirements

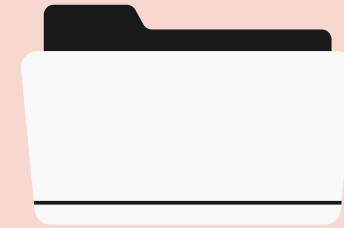
Without well written document:



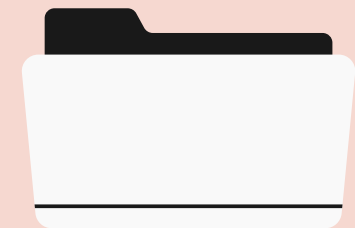
- Developers do not know what to build.
- Customers do not know what to expect.
- What to validate.

Requirements describe **WHAT** not **HOW**.

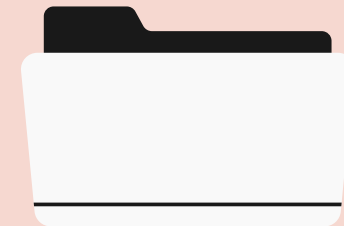
Produces one large document written in natural language containing a description of what the system will do without describing how it will do it.



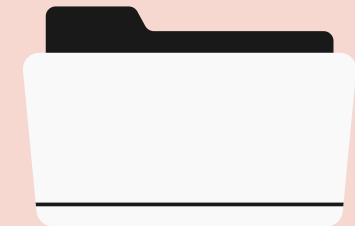
Functional  
requirements



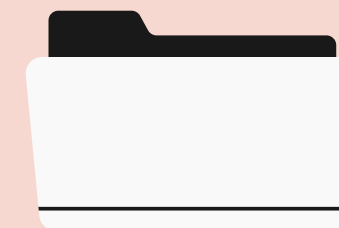
Non-Functional  
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Known requirements

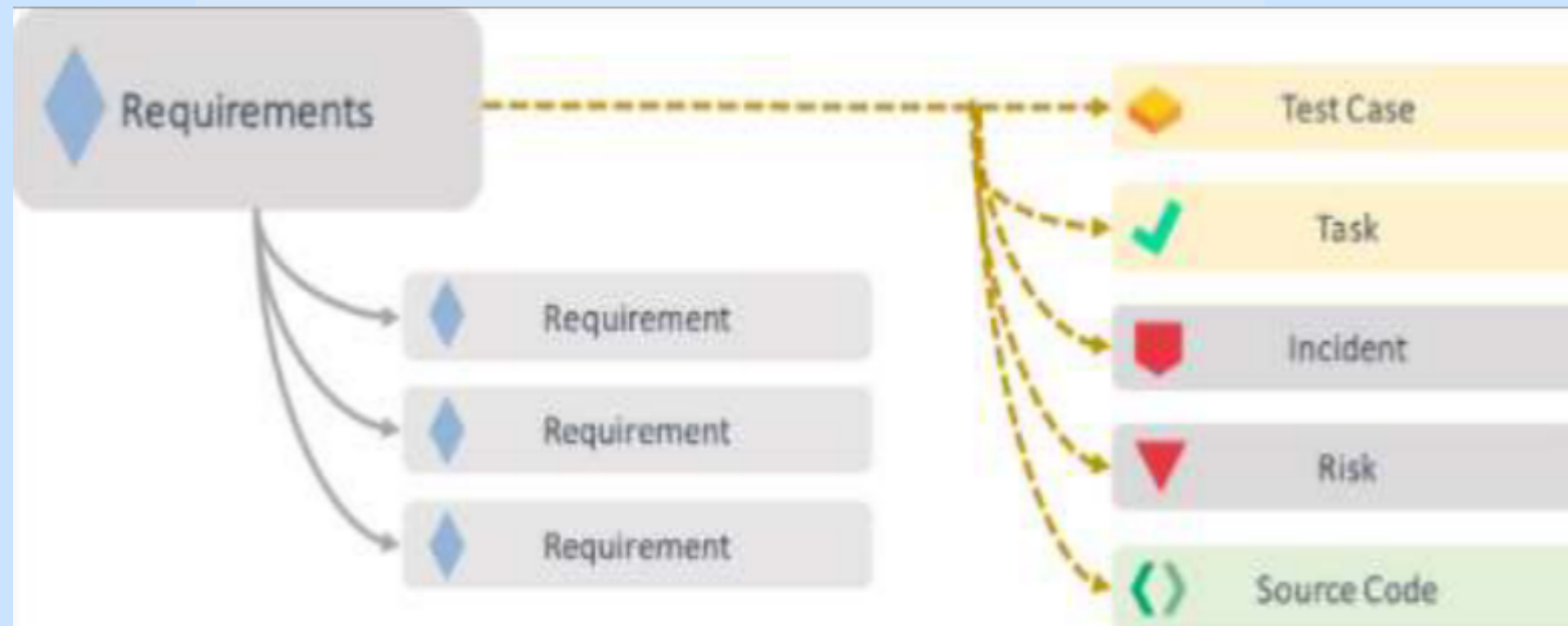


Unknown  
requirements



Undreamed  
requirements

# Requirement Traceability





- It ensures that each business need is tied to an actual requirement, and that each requirement is tied to a deliverable.
- Basically, there needs/requirements are tied/mapped to test cases or defects/failure and reverse engineering can be done to find the requirement from where the defect came from.
- It is the ability to trace a requirement forward and backwards in the development life cycle.






	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
S.No.	Req ID	Epic (Req Desc)	User Story	TC ID	TC Design	Test Design	Test Designer	UAT test Req?	Test Execution			Defects?	Defect ID	Defect Status	Req Coverage Status		
									Test Env	UAT Env	Prod Env						
1	Req01	Login to the application	As a user, when the user enters the credential, gets redirected to the same/next page	TC01	Login with invalid credentials	Completed	vanshika	no	passed	no run	no run	yes	DFCT001	Test ok	Partial		
2				TC02	Login with valid username and invalid password	Completed	vanshika	no	passed	no run	no run	yes	DFCT002	Test ok	Partial		
3				TC03	Login with a invalid username and valid password	Completed	vanshika	no	passed	no run	no run	yes	DFCT003	Test ok	Partial		
4				TC04	Login with a valid username and password	Completed	vanshika	yes	passed	passed	no run	none	none	N/A	Partial		
5				As a user, when the user forgets the password, gets redirected to the password recovery page	TC05	Login with recovery e-mail/ phone number	Completed	vanshika	yes	passed	passed	no run	none	none	N/A	Partial	






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




  
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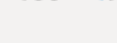



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


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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																
2	S.No.	Req ID	Epic (Req Desc)	User Story	TC ID	TC Design	Test Design	Test Designer	UAT test Req?	Test Execution			Defects?	Defect ID	Defect Status	Req Coverage Status
3										Test Env	UAT Env	Prod Env				
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5	2				TC02	Login with valid username and invalid password	Completed	vanshika	no	passed	no run	no run	yes	DFCT002	Test ok	Partial
6	3				TC03	Login with a invalid username and valid password	Completed	vanshika	no	passed	no run	no run	yes	DFCT003	Test ok	Partial
7	4				TC04	Login with a valid username and password	Completed	vanshika	yes	passed	passed	no run	none	none	N/A	Partial
8	5			As a user, when the user forgets the password, gets redirected to the password recovery page	TC05	Login with recovery e-mail/ phone number	Completed	vanshika	yes	passed	passed	no run	none	none	N/A	Partial
9	6			As a user, when the user forgets the username, gets redirected to the username recovery page	TC06	Login with recovery e-mail/ phone number	Completed	vanshika	yes	passed	passed	no run	none	none	N/A	Partial

# Software Development Life Cycle (SDLC) Models

The software development life cycle (SDLC) is the process of planning, writing, modifying, and maintaining software. Developers use the methodology as they design and write modern software for computers, cloud deployment, mobile phones, video games, and more.

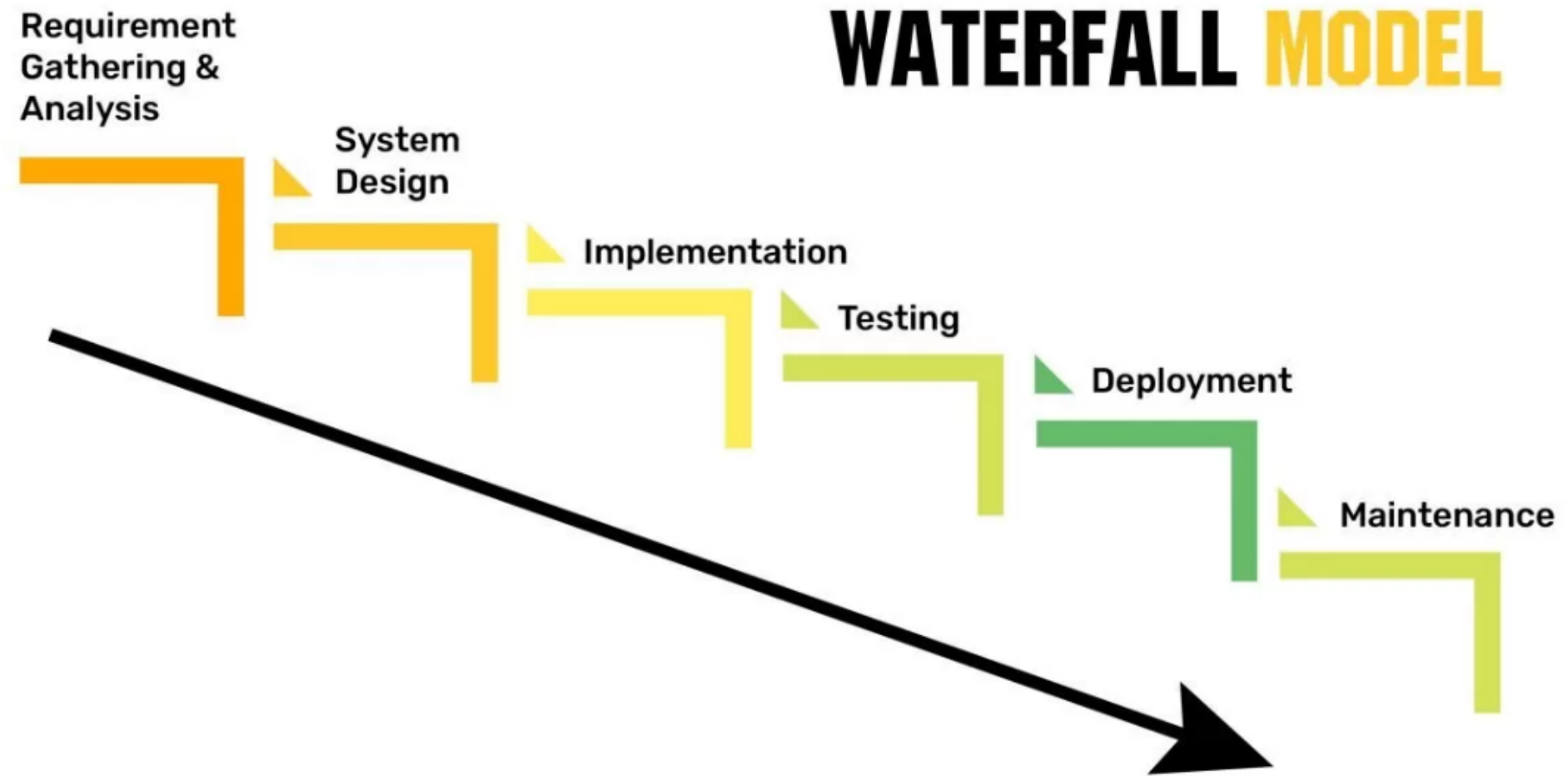
Two types of models studied under SDLC:

- (i) Waterfall
- (ii) Agile



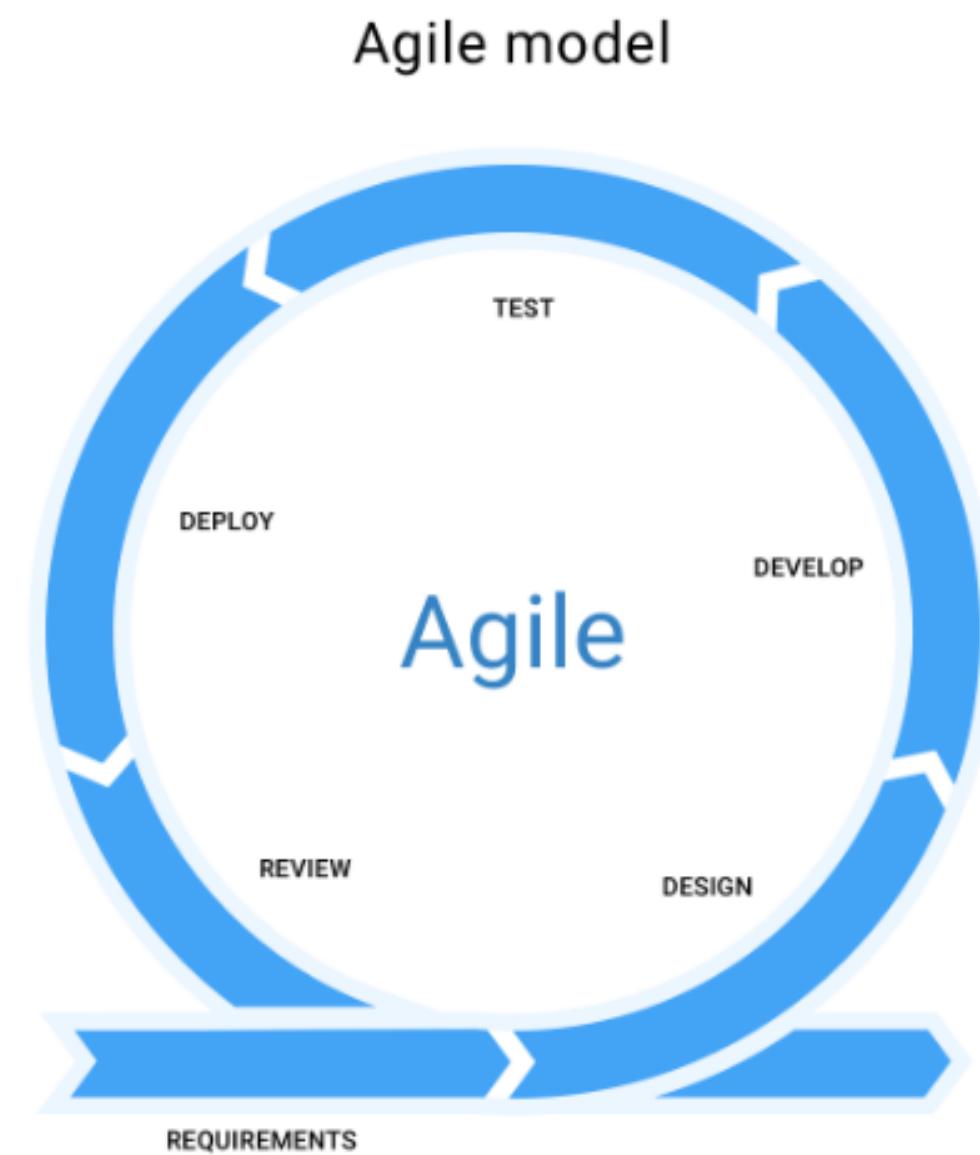


# Waterfall Model



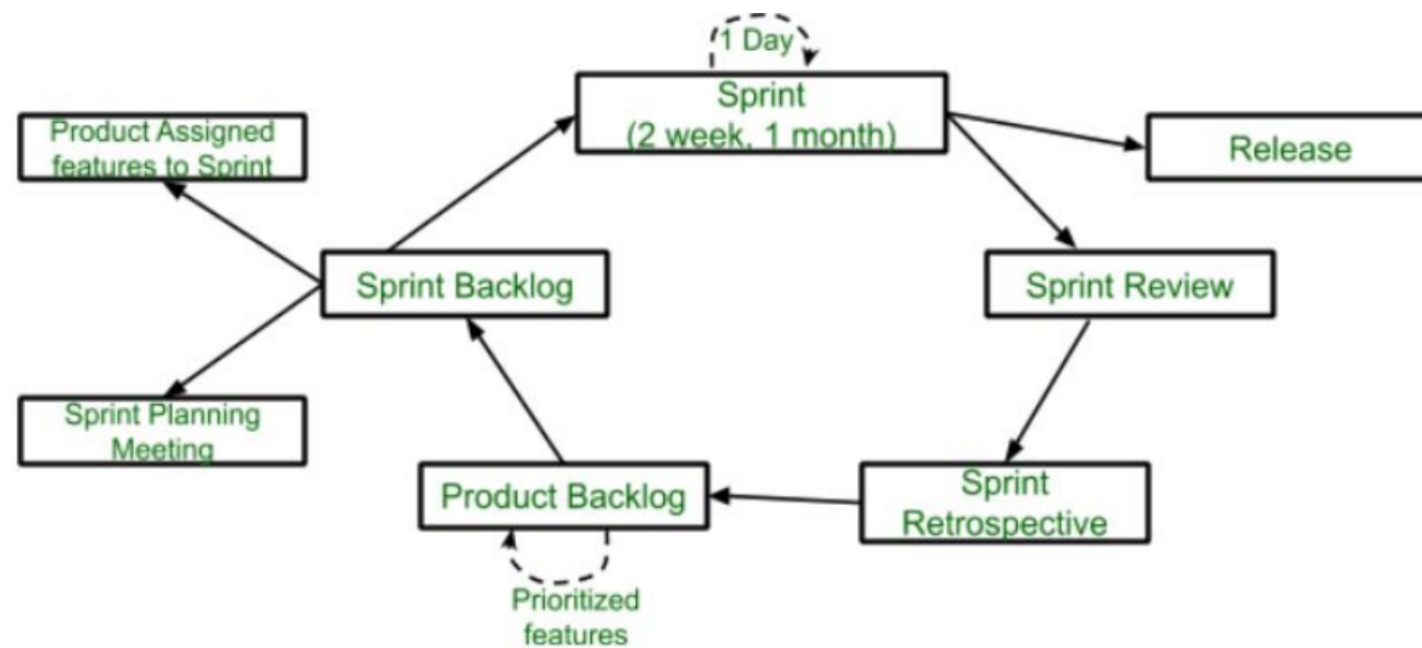
- Simple and easy to understand and use
- Easy to manage due to the rigidity of the model. Each phase has specific deliverables and a review process.
- Phases are processed and completed one at a time.
- Works well for smaller projects where requirements are very well understood.
- Clearly defined stages.
- Well understood milestones.
- Easy to arrange tasks.
- Process and results are well documented.

# Agile Development Model



- Working through Pair programming produces well-written compact programs which have fewer errors as compared to programmers working alone.
- It reduces the total development time of the whole project.
- Agile development emphasizes face-to-face communication among team members, leading to better collaboration and understanding of project goals.
- Customer representatives get the idea of updated software products after each iteration. So, it is easy for him to change any requirement if needed.
- Agile development puts the customer at the center of the development process, ensuring that the end product meets their needs.

# Scrum

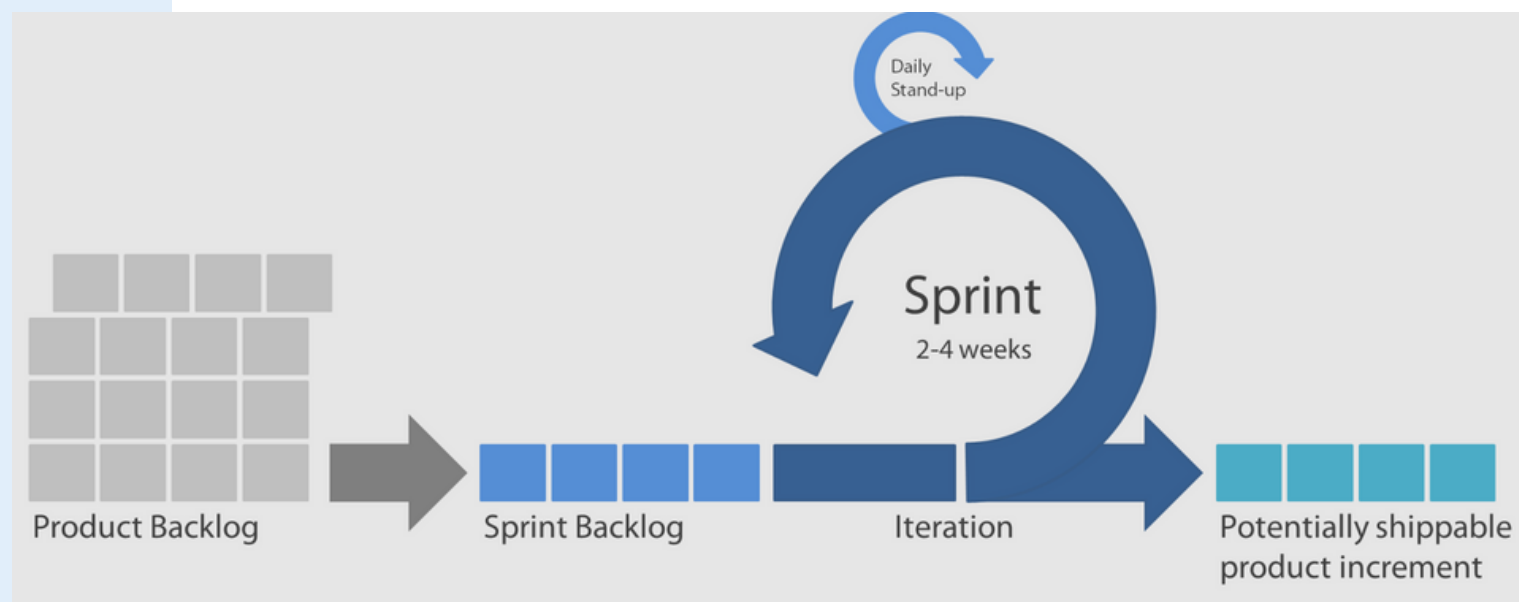


Scrum is the type of Agile framework. It is a framework within which people can address complex adaptive problem while productivity and creativity of delivering product is at highest possible values. Scrum uses Iterative process.

## Silent features of Scrum are:

1. Scrum is light-weighted framework
2. Scrum emphasizes self-organization
3. Scrum is simple to understand
4. Scrum framework help the team to work together

# Sprint



A Sprint is a time box of one month or less. A new Sprint starts immediately after the completion of the previous Sprint.

**Release:** When the product is completed, it goes to the Release stage.

**Sprint Review:** If the product still has some non-achievable features, it will be checked in this stage and then passed to the Sprint Retrospective stage.

**Sprint Retrospective:** In this stage quality or status of the product is checked.

**Product Backlog:** According to the prioritize features the product is organized.

**Sprint Backlog:** Sprint Backlog is divided into two parts Product assigned features to sprint and Sprint planning meeting.

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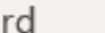

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




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





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	A	B	C	D	E	F	G	H
1	LOGIN APPLICATION							
2	S.No.	Epic	User Story	Retrospective	Outcome of retrospective	Story points	Priority	Hours allocated
3	1	Login to the application	As a user, when the user enters the credential, gets redirected to the same/next page	What went well	The way our team coordinated and worked on different user stories went well	5	2	10
4					Allocation of story points, priority and hours			
5	2		As a user, when the user forgets the password, gets redirected to the password recovery page	What went bad	We were a bit slow while making the login application and describing it's functionality using devops	8	7	12
6					Communication gap was there			
7	3		As a user, when the user forgets the username, gets redirected to the username recovery page	What could be better	Time- management for us to understand the concepts related to story points and priority could have been better	5	2	8
8					We as a team and the internet connectivity could have been more efficiently			
9								



	A	B	C	D	E	F	G	H
1	LOGIN APPLICATION							
2	Test case ID	Test case description	Pre-requisites/Pre-conditions	Test step	Test data/ Test input	Expected Results	Actual Results	Test Result (Pass/Fail)
3	TC001	Test case for valid entry of user name and password and for successful user login	1. User id and password should exist in the system. 2. Token should be generated while logging-in.	Step 1: Invoke the Internet Explorer and type in the URL name	<a href="https://mail.google.com">https://mail.google.com</a>	The Gmail homepage should be displayed	The Gmail homepage was displayed	Passed
4	TC002			Step 2: In the username field, enter a valid value	<a href="mailto:vgsecretgupta18@gmail.com">vgsecretgupta18@gmail.com</a>	The field should accept the Username	The field accepted entered Username	Passed
5	TC003			Step 3: In the password field, enter a valid value	xyz	The field should accept the password	The field accepted entered password	Passed
6	TC004			Step 4: Click on log-in button	Select/ activate log-in button	The user should be logged in and the user's G-mail page should be displayed	The user was able to log-in and the user's G-mail page is displayed	Passed



THANK YOU!

Made By-  
Vanshika Gupta (Batch-6)

