

JANUARY

1 Shabaan 1446 H

31

2025

Friday

Acceptance testing → Customer available to test.

Validation → IEEE 93 standard - Expr. quality of software products.

Amalg. consistent, efficient, reliable

① Debugging Tech:

Core Dump Analysis

Printout of all software details in memory locations

All nodes / flows of how memory operates to an actor.

Disadv: needs more CPU time to analysis time. One of the most useful activity

② Traces

The print we keep for register. Traces keep points only under certain circumstances.

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٢٠٢٥

FEBRUARY

2 Shabaan 1446 H

Saturday

② Write program that runs concurrently along with the main program.

Adv → flexible, dynamic

Disadv → it only works on machine language programs.

③ Static Testing Tools

Has, static analyzers, code inspectors

④ Dynamic Testing Tools

Coverage analysis

Diff b/w ① & ② ?

Analyze code

Documentation

CPP check

→ Performance benchmarks
- by chd

e.g. JUnit for JAVA
Unity framework for C

(chd pic 18/1/25)
working

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26	27	28	29	30	31																					

Week 5

FEBRUARY

3 Shabaan 1446 H

02

2025

Sunday

Problems during maintenance

Programmer maintaining software must understand everything about software.

Mostly someone else writes code, there is another developer in maintenance.

Eg: If backend developer didn't form maintenance team of charge in code, then it is wrong. One of the person who wrote code must be in maintenance dept.

Regression Testing -

Development testing to ensure software goes

Retest of software after few changes done to it & making sure no new errors are introduced to previously tested code.

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١٨	١٩	٢٠	٢١	٢٢	٢٣	٢٤	٢٥	٢٦	٢٧	٢٨	٢٩	٣٠	٣١			
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FEBRUARY

4 Shabaan 1446 H

03

2025

الاثنين

شباط / فبراير

٤ شعبان - ١٤٤٦ هـ

Monday

Black Box

White Box testing

procedural testing

needs pgm knowledge, logic, & structure

Used in UT, IT & security testing.

Eg: Algorithm behind diagnostic dashboard

Black box Te.

Functional testing without knowing internal code

Call pic - ١٨١٧١٢٥ → what ap?

14:00

17:00

18:00

FEBRUARY
7 Shabaan 1446 H

06

2025

Thursday

Principles of Agile

Satisfy customer

- welcome changing requirements
 - deliver working software frequently
 - collaborate daily, f2f conversatⁿ, call
Team meet
 - Promote sustainable development
 - Attention to Technical Excellence
 - simplicity imp.
 - Measure ~~efficiency~~ of product progress through work
 - Regularly improving - reflect on continuously

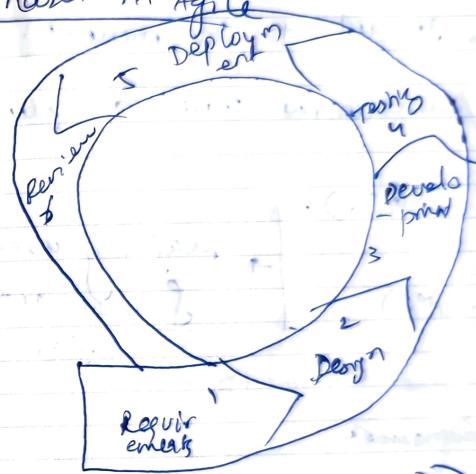
FEBRUARY

07

2025

SAD → ٨٠١٧ Architect
Document شباط ٢٠١٧
LD, ٢٤٣٦٩
UCD شعبان ٨

الجمعية



15.00 The Pillars of Agile (CIMP)

Individuals 3
interactions over
processes 3 tools

Wor(l)d Software
over Comprehensi
-ve documents

Responding to change
over following a plan

AGILE VALUES

Customer calls -
borrows
contract over
negotiations

FEBRUARY

9 Shabaan 1446 H

08

2025

Saturday

Agile → Iteration + Incremental

→ 4-5 frameworks move to implement
Agile:

① Scrum (56%)

Kanban

Hybrid (11%)

Scrum

Lean framework

Majorly used
framework

(fwt)

الجمعة ١٢ شعبان

Scrum

roles

→ Product owner

→ Scrum Master

→ Scrum Team

→ Stakeholders / Clients

FEBRUARY

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09

2025

Sunday

Project Values

Epic

large items that can be used to group related features. Span across multiple sprints / teams

Features

→ E-login sign up

Logically group user stories into features of the product. They fit within a release.

use stories → creating a login screen

short description of functionalities as viewed from end user perspective

tasks → UI interface for Humanistic login

Specific actions

Bugs

Pic

Week 6

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١٢	١٣	١٤	١٥	١٦	١٧	١٨	١٩	٢٠	٢١	٢٢	٢٣	٢٤	٢٥	٢٦	٢٧	

FEBRUARY

13 Shabat 1446 H

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2025

Wednesday

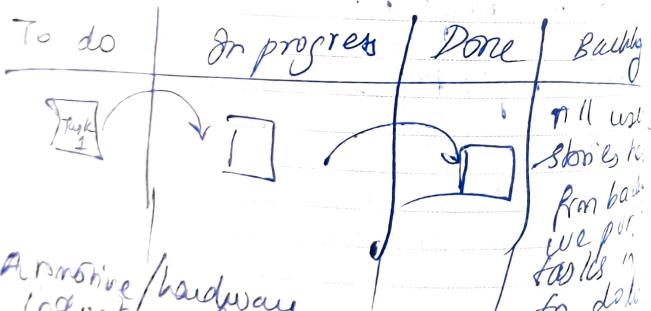
Sprint overflows if we can't finish
the tasks we took up -

Swim team → max 9 ppl only

cross functional teams available

Diff b/w Kanban & Scrum

Karbon sind pic in ~~antrag~~ ^{abw} alle w



Automotive hardware industry follows above disc.
Flexible with tiny → carbars.
So am → we must stick
the frame.

FEBRUARY

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13

2025

شیاط / فیراں

١٤٤٦ هـ - شعبان ١٩

الخميس

Thursday

No notes (there in Kandian and in
Sauv (Suommasluu etc.)

10:00 No Sprint in Kanban

11.00 Jira - proj. management tool
used for Agile & Scrum

13.01 To do In progress In review
Scrum table :-

Backlog	Stories	To do	In progress	To review	Done
D D	D D D	D	D	D D D	D

Recently for test - CAT team results
you will? in CAT

Then they move it to "Done" then client gets it for demo

FEBRUARY

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2025

Friday

شباط / فبراير
١٥ شعبان - ١٤٤٦ هـ

Kanban boards.

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شباط / فبراير

١٦ شعبان - ١٤٤٦ هـ

السبت

Benefit

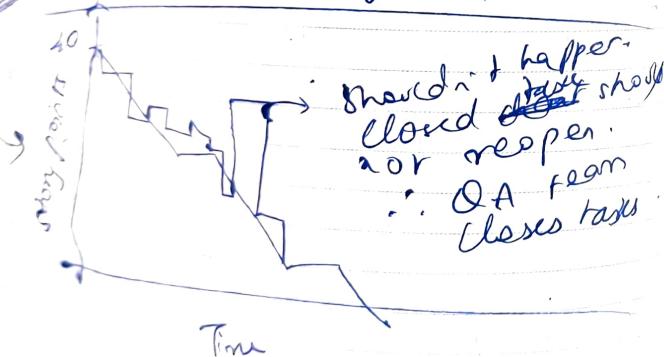
kanban boards can be seen by all.

so we can keep better track.

If something goes wrong, we can always go back to the boards.

sprint Burndown Chart

 Atlassian.com - agile tutorials.



if of Kanban

hybrid approach → Scrum + Kanban

2025
Standards to follow:

0:00 zero defects

9:00 Bugs less than 5%
Review comments less than 10%

10:00 22/7/25

CTTS Day 5

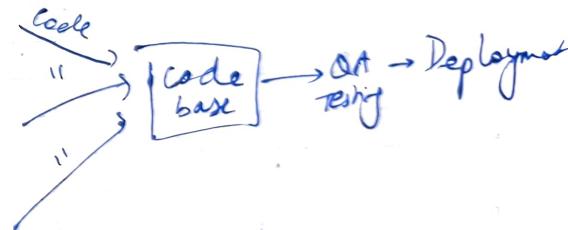
CI, CD → Continuous integration delivery

Traditional Way

Programmer 1

Programmer 2

Programmer 3



Disadv: Any update done by an individual can't be updated, ∵ CI, CD shift

Week 7

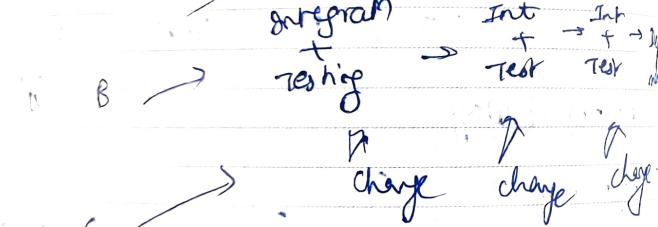


FEBRUARY
17 Shabaan 1446 H

Sunday

CI & CD

Prog. A



Every step we can update

CI - CD pipeline → All developers can do unit testing & deployment

Build + run + test taken care of once you push or feature to repository

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2025

١٦ شعبان ١٤٤٦ هـ

FEBRUARY
18 Shabaan 1446 H

Monday

Code

9:00

Commit

10:00

related code

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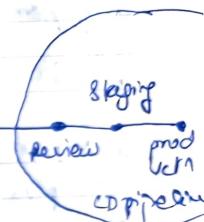
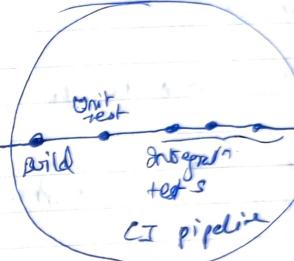
8:00

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2025

شباط / فبراير
١٨ شعبان ١٤٤٦ هـ

الاثنين



CD → Automated delivery through deployment environments.

CI → Small changes, updates

Adv CI - CD

Quality code >>

Business needs

More security coz less human error



FEBRUARY

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Tuesday

Implementing CI

Processes, Consistency, Effective Collabor.

Implementing CD

Complex, focus on orchestration, Dev Wright.

Code workshop

Source Control (SVN)



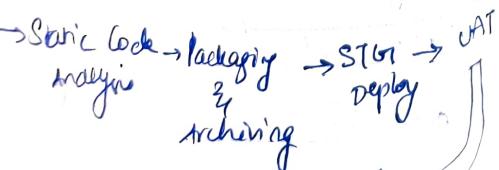
Develop (IDE)



Build



UNIT TEST



UAT done by QA team.



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Thursday

SonarLint VS

20

2025

SonarQube

unit testing today

Sonarlint supported languages → Java, C, etc.

Code Quality Metrics

pic WhatsApp

Code coverage & how many lines of code is unit tested

Eg: 10 line code

Unit testing if done on 10 lines, then 100% code coverage

Compiler warnings → We have seen online C pgm → do not ignore

Code comment → ~~comment the~~ it should be must explain each part
The reader must understand > 25%

FEBRUARY

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Friday

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2025

شباط / فبراير

٢٢ شعبان - ١٤٤٦

الجمعة

8:00 Code Smell → code smells like a certain code line MAY cause a problem in future for currently no problem

10:00 cognitive Complexity

11:00 how difficult it is to understand the code

12:00 cyclomatic complexity

13:00 how many loops & nests in code if, for, while loops [1-19 parts]

14:00

15:00 10c → [line of code] reviewed by a senior [which features etc.]

16:00 peer review

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