

Subject line : Axis Fintech || DAY 7 || 17-03-23

1. Write the steps “ using git how to push code in github/gitlab/bitbucket”.

= The following steps are:-

.git init (to create the .git folder and also to make the code folder into a special folder or to create the three areas ex- working area, staging area and local repo)

.git add (to move the files from working area to staging area)

.git commit -m “ Your message ” (to move your code from staging area to local repo)

.git remote add origin <HTTP link> (to connect your local repo with remote repo)

.git push -f origin <branch name> (to push your code into remote repo)

2. Write a C program to sort the elements of Array.

= The below code is a bubble sort algorithm:-

```
#include <stdio.h>
```

```
int main() {
```

```
    int n, i, j, temp;
```

```
    int arr[100];
```

```
    printf("Enter the size of the array: ");
```

```
    scanf("%d", &n);
```

```

printf("Enter %d integers: \n", n);

for (i = 0; i < n; i++) {

scanf("%d", &arr[i]);

}


// Bubble Sort Algorithm

for (i = 0; i < n-1; i++) {

for (j = 0; j < n-i-1; j++) {

if (arr[j] > arr[j+1]) {

// swap the elements

temp = arr[j];

arr[j] = arr[j+1];

arr[j+1] = temp;

}

}

}


printf("The sorted array is: \n");

for (i = 0; i < n; i++) {

printf("%d ", arr[i]);

}

printf("\n");

return 0;

}

```

3.Explain Waterfall model,Agile and Devops in bread.

= The Waterfall model, Agile, and DevOps are three different software development lifecycle methodologies.

The Waterfall model is a linear and sequential approach to software development. It is a structured methodology that follows a series of sequential stages, starting with requirements gathering, followed by design, implementation, testing, and deployment. Each stage is completed before moving on to the next one, and changes made at later stages can be difficult and costly to implement.

Agile is an iterative and incremental approach to software development that emphasizes flexibility and adaptability. It involves breaking the development process into small, manageable chunks called sprints. During each sprint, a small set of features is developed, tested, and reviewed before being integrated into the final product. Agile methodology emphasizes communication and collaboration among team members, customers, and stakeholders to ensure that the final product meets the user's needs.

DevOps is a methodology that emphasizes collaboration and communication between development and operations teams to streamline the software development process. DevOps involves continuous integration, continuous delivery, and continuous deployment to ensure that the software is always ready for deployment. DevOps is characterized by a high degree of automation and emphasizes frequent and fast delivery of code changes to meet the needs of the business.

4.What is the operating system? Write at least 20 commands of linux os.

= An operating system (OS) is a software program that manages computer hardware and software resources and provides common services for computer programs. It acts as an intermediary between applications and the computer hardware, allowing applications to communicate with the hardware without needing to know the details of how the hardware works. The OS provides key functions such as managing memory and processing resources, input/output operations, file systems, storage devices, and user interfaces. Examples of popular OSs include Microsoft Windows, macOS, Linux, and Android.

20 commands in linux os:-

`.mkdir <file name>`

`.cd <file name>`

`.cd ..`

`.cat > a`

`.cat >> a`

`.cat a`

`.tac a`

`.cat a b c ... > d`

`.touch a`

`.touch -a a`

`.touch -m a`

`.stat a`

`.vi/vim a`

`.nano a`

`.mv a b`

`.cp a b`

`.cp -r a/p b`

`.rmdir a`

`.rm a`

`.ls`

5.What is shell script? Write program for

1.Hello World 2.Variable 3.Operators 4.Control Statement 5.Function

= A shell script is a program written in a scripting language that is interpreted by the shell of an operating system, typically a Unix-based system. It is used to automate and simplify repetitive tasks, execute system commands, and manipulate files and directories. Shell scripts are commonly used for system administration, data processing, and software development tasks.

1.Hello world program

```
#!/bin/bash
```

```
echo "Hello, World!"
```

2.Variable program

```
#!/bin/bash
```

```
echo "Enter the number:"
```

```
read num
```

```
echo "The number is $num"
```

3.Operators program

```
#!/bin/bash
```

```
# Arithmetic operator
```

```
num1=10
```

```
num2=5
```

```
echo "Arithmetic operators:"
```

```
echo "num1 + num2 = $((num1 + num2))"
```

```
echo "num1 - num2 = $((num1 - num2))"
```

```
echo "num1 * num2 = $((num1 * num2))"
```

```
echo "num1 / num2 = $((($num1 / $num2))"
echo "num1 % num2 = $((($num1 % $num2))"
echo
```

Comparison operators

```
str1="hello"
str2="world"
echo "Comparison operators:"
echo "num1 -eq num2 = $((num1 == num2))"
echo "num1 -ne num2 = $((num1 != num2))"
echo "num1 -gt num2 = $((num1 > num2))"
echo "num1 -lt num2 = $((num1 < num2))"
echo "num1 -ge num2 = $((num1 >= num2))"
echo "num1 -le num2 = $((num1 <= num2))"
echo "str1 == str2 = $((str1 == str2))"
echo "str1 != str2 = $((str1 != str2))"
```

4.Control statement program

```
#!/bin/bash
```

```
#If else condition
```

```
echo Enter the 1st number
```

```
read a
```

```
if [ `expr $a % 2` -eq 0 ]
then
    echo The number is even
else
    echo The number is odd
fi
echo
```

```
#while loop
i=1
while [ $i -le 10 ]
do
    echo Number `expr $i \* 2`
    i=`expr $i + 1`
done
echo
```

```
#for loop
x="1 2 3 4 5 6"
for i in $x
do
    echo $i
done
echo
```

5.Function program

```
#!/bin/bash
```

```
#function
```

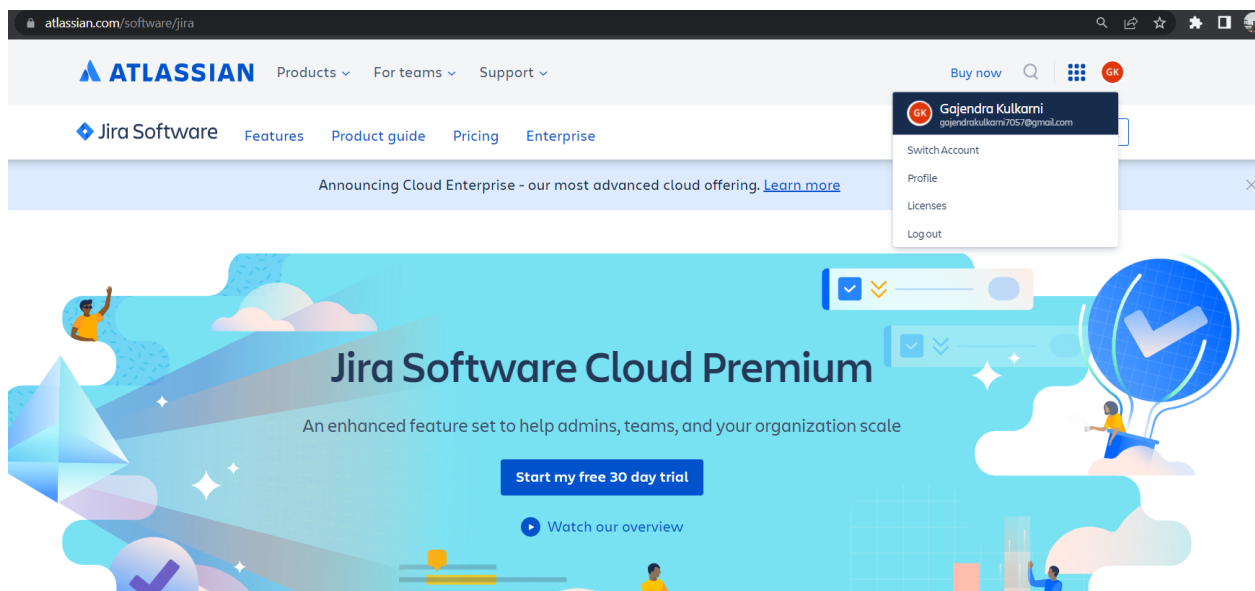
```
function show(){  
    echo Hi $1 $2  
}
```

```
show gajendra kulkarnis
```

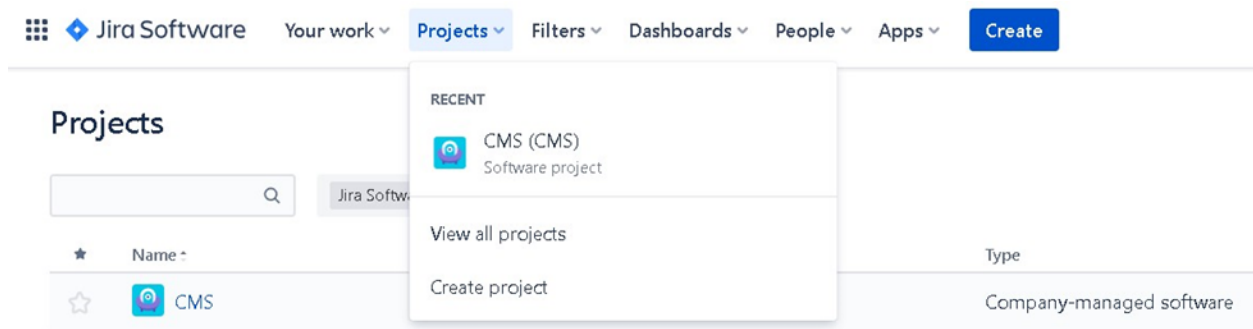
6.Write steps with screenshot for creating project, epic, story, sprint.

= The following are some few steps:-

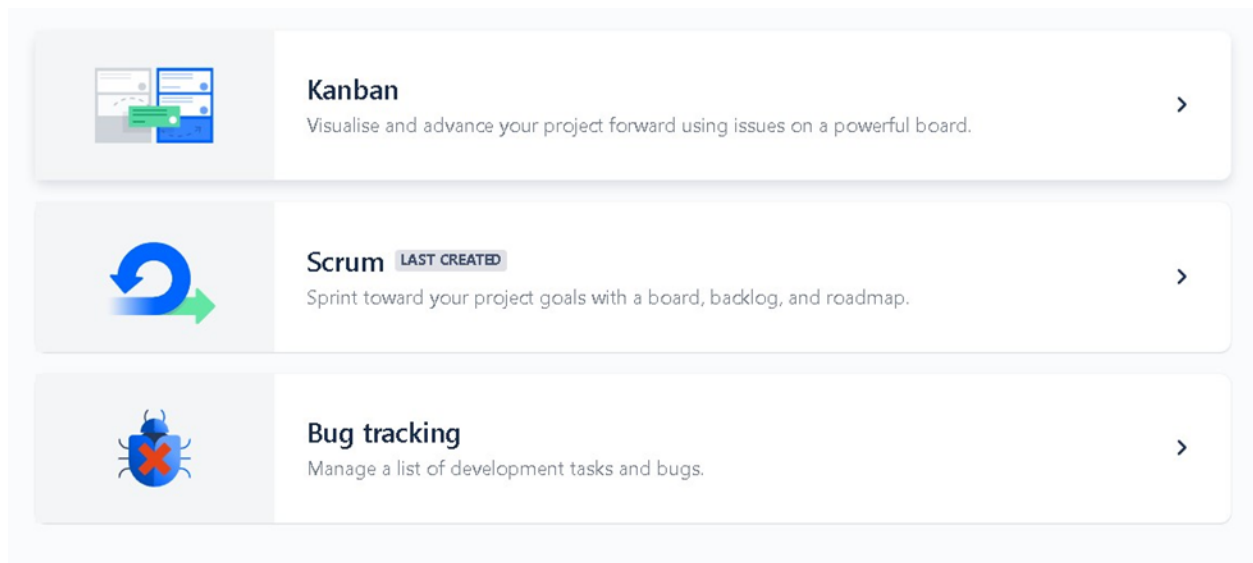
1.Log in to Jira software



2. Click on create project



3. Select template. We have to select scrum.



4. After selecting scrum click use template.

Scrum

Use template

The Scrum template helps teams work together using sprints to break down large, complex projects into bite-sized pieces of value. Encourage your team to learn through incremental delivery, self-organize while working on a problem, and regularly reflect on their wins and losses to continuously improve.

Plan upcoming work in a backlog

Prioritize and plan your team's work on the backlog. Break down work from your project roadmap, and order work items so your team knows what to deliver first.

[Learn more about the backlog](#)

Organize cycles of work into sprints

Sprints are short, time-boxed periods when a team collaborates to complete a set amount of

PRODUCT

Jira Software

RECOMMENDED FOR

Teams that deliver work on a regular cadence

DevOps teams that want to connect work across their tools

ISSUE TYPES

Epic

Story

Bug

Task

Sub-task

Next: Select a project type

Use template

5. Select your project type. Click on "Select a company-managed project".

1 Project template



Scrum

Sprint toward your project goals with a board, backlog, and roadmap.

Change template

2 Choose a project type



You'll need to create a new project if you decide to switch project types later.

Team-managed

Set up and maintained by your team.

For teams who want to control their own working processes and practices in a self-contained space. Mix and match agile features to support your team as you grow in size and complexity.

Select a team-managed project

Company-managed

Set up and maintained by your Jira admins.

For teams who want to work with other teams across many projects in a standard way. Encourage and promote organizational best practices and processes through a shared configuration.

Select a company-managed project

The last project you created was a company-managed project

6. Enter your project name and click Create project. Your project will be created.

Add project details

You can change these details anytime in your project settings.

Name

SIM

Key

SIM

☐ Share settings with an existing project

☐ Connect repositories, documents, and more

Sync your team's work from other tools with this project for better visibility, access, and automation.

Template

Change template



Scrum

Sprint toward your project goals with a board, backlog, and roadmap.

Type

Change type



Company-managed

Work with other teams across many projects in a standard way.

Cancel

Create project

7. Then click on issues on the left side bar, then click on create and select Issue type as Epic

Create issue



Project *



SIM (SIM)



Import issues



Issue type *



Epic



[Learn more](#)

Status ⓘ

To Do



This is the issue's initial status upon creation

Epic Name *

Provide a short name to identify this epic.

☐ Create another issue

Cancel


Create

8. Then again click on create and select Issue type as Story, then click create.

Create issue



Project*

 SIM (SIM) 

Import issues



Issue type*

 Story 

[Learn more](#)

Status ⓘ

To Do 

This is the issue's initial status upon creation

Summary*

Components

☐ Create another issue

Cancel

Create

9. Then click on backlogs on the left side bar. Here you can see all your backlogs. Now click on Create sprint.

Backlog

 Share



Search backlog



Only My Issues

Recently Updated

 Insights

VERSIONS
EPICS



Plan your team's work

The backlog is your team's to-do list. Create 3 issues, and rank them in order of priority.

Backlog 1 issue

Create sprint



 Chip developing

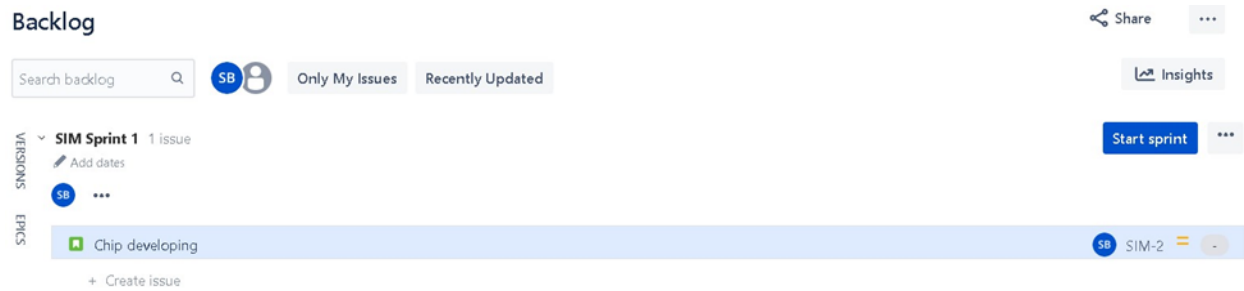


SIM-2



+ Create issue

10. After clicking on Create sprint we have to drag the backlogs to the sprint option. After that we have to click Start sprint.



10. Then we have to add the duration of our sprint, after adding the time duration click start.

Start sprint



Issue SIM-2 does not have a value for the 'Estimate' field. Values entered after the start of the sprint will be treated as scope change.

1 issue will be included in this sprint.

Sprint name: *

SIM Sprint 1

Duration: *

2 weeks



Start date: *

18/Mar/23 01:28 PM



End date: *

1/Apr/23 01:28 PM



Sprint goal:

Start

Cancel

7. Write various stages of Agile methodology.

= The following stages are:-

Stage-1:- Create Epic and stories.

Stage-2:- Create Scrum team.

Stage-3:- Create Sprint plan.

Stage-4:-Scrum call (Daily).

Stage-5:-Repeat stage-3 and stage-4.

8.Difference between

A.Waterfall model, Agile model and Devops model.

=

	Water Fall Model	Agile Model	DevOps model
Approach	Linear and Sequential	Iterative and Incremental	Continuous Integration and Deployment
Process	Formal and Structured	Flexible and Adaptive	Flexible and continuous
Development	Sequential and Document-Driven	Iterative and Collaborative	Continuous and Collaborative
Communication	Formal and controlled	Collaborative and Open	Collaborative and open
Testing	Done at the end of the cycle	Done throughout the cycle	Automated and continuous
Deployment	Done at the end of the cycle	Done at the end of each iteration	Automated and Continuous

B.Scrum and Kanban.

=

Aspect	Scrum	Kanban
Philosophy	Iterative, incremental development	Continuous flow of work

Roles	Product owner, scrum master, development team	No prescribed roles
Backlog Management	Product Backlog, Sprint Backlog	Work items, Backlog
Meetings	Daily Scrum, Sprint Planning, Sprint Review, Retrospective	None prescribed, but can have daily stand-up meetings

C.Git and Bit-Bucket.

=

Aspect	Git	Bitbucket
Version Control	Distributed version control system	Git-based version control system
Hosting	Self-hosted or cloud-based	Cloud-based
Repository	Can create and manage multiple repositories	Can create and manage multiple repositories
Access Control	Supports various access control mechanisms	Allows granular permission management

D.LVCS and CVCS and DVCS.

=

Aspect	LVCS	CVCS	DVCS
Centralization	Centralized, with a single server storing versions	Centralized, with a single server storing versions	Decentralized, with every user having a complete repository
Collaboration	Requires exclusive locks to prevent conflicts	Allows concurrent access, but conflicts must be resolved	Allows concurrent access, with automatic merging
History	Only stores the latest version	Stores the full history, but only on the central server	Stores the full history locally, with the option to push changes to a central server
Offline access	Require network access to access files	Require network access to access files, but may allow caching	Allows full access to the repository, even when offline
Branching and Merging	Limited branching and merging capabilities	More advanced branching and merging capabilities	Advanced branching and merging capabilities

E.DOS and WINDOWS.

=

Aspect	DOS	Windows
User Interface	Command-line interface	Graphical user interface(GUI)
Multitasking	Not a true multitasking system	True multitasking system
File system	Support FAT and FAT32 file systems	Supports NTFS file system and FAT/FAT32 for compatibility
Device Drivers	Requires specific drivers for hardware	Includes pre-installed drivers for most hardware
Memory Management	Uses conventional memory and upper memory	Uses virtual memory for memory management
Compatibility	Runs on older hardware	Runs on newer hardware but may not support older software

Security	No built-in security features	Includes built-in security features such as user accounts and permissions
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9. Write name of 15 DevOps tools.

= Here are some 15 devops tools:-

.Jenkins

.Gitlab

.GitHub

.Bitbucket

.Docker

.Kubernetes

.Chef

.Puppet

.Jira

.Selenium

.AWS CloudFormation

.Ansible

.Nagios

.Prometheus

.Grafana

10. Write names of 10 Cloud providers.

= Here are 10 cloud providers:-

.Amazon Web Services(AWS)

.Microsoft Azure

.Google Cloud Platform(GCP)

.IBM Cloud

.Oracle Cloud

.Alibaba Cloud

.Salesforce Cloud

.Cloudflare

.DigitalOcean

.Linode