SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

20IT302-SOFTWARE ENGINEERING AND
MANAGEMENT LABORATORY

SEMESTER-III

NAME   **:** ARTHIKA G

REGISTER NO.   **:** 20EUCS015

DEGREE & BRANCH : B.E. COMPUTER SCIENCE ENGINEERING

CLASS & SECTION   **:** CSE A II YEAR

SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

20IT302-SOFTWARE ENGINEERING AND MANAGEMENT LABORATORY

CONTINUOUS ASSESSMENT RECORD

SUBMITTED BY

NAME: ARTHIKA G   **REG.NO.:** 20EUCS015

CLASS: CSE A   **BRANCH**: CSE

BONAFIDE CERTIFICATE

This is to certify that this bonafede record work done by **Ms. ARTHIKA G (Reg.No:20EUCS015)** during the academic year 2021.

Faculty In-Charge

LIST OF EXPERIMENT

SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY COIMBATORE
(An Autonomous Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

20IT302-SOFTWARE ENGINEERING AND MANAGEMENT LABORATORY
ODD SEMESTER - 2021-2022

CONTINUOUS EVALUATION SHEET

REFERENCES RUBRICS TABLE

Criteria	Range of Marks			
	Excellent	Good	Average	Below Average
Objective, Description with sample data (20 marks)	18-20	14-17	10-13	0-9
Scenario with proper syntax and structure (30 marks)	27-30	21-26	15-20	0-14
User story creation with description, source code (30 marks)	27-30	21-26	15-20	0-14
Testing and output (10 marks)	9-10	7-8	5-6	0-4
Documentation and Viva(10 marks)	9-10	7-8	5-6	0-4

OVERALL MARKS			
90-100	70-89	50-69	0-49
Excellent	Good	Average	Below Average

UML DIAGRAM

EX: 1   **DATE: 10/08/2021**

ROLL.NO: 20EUCS015   **NAME:ARTHIKA G**

AIM

To draw an UML Diagram for Stack Inventory System.
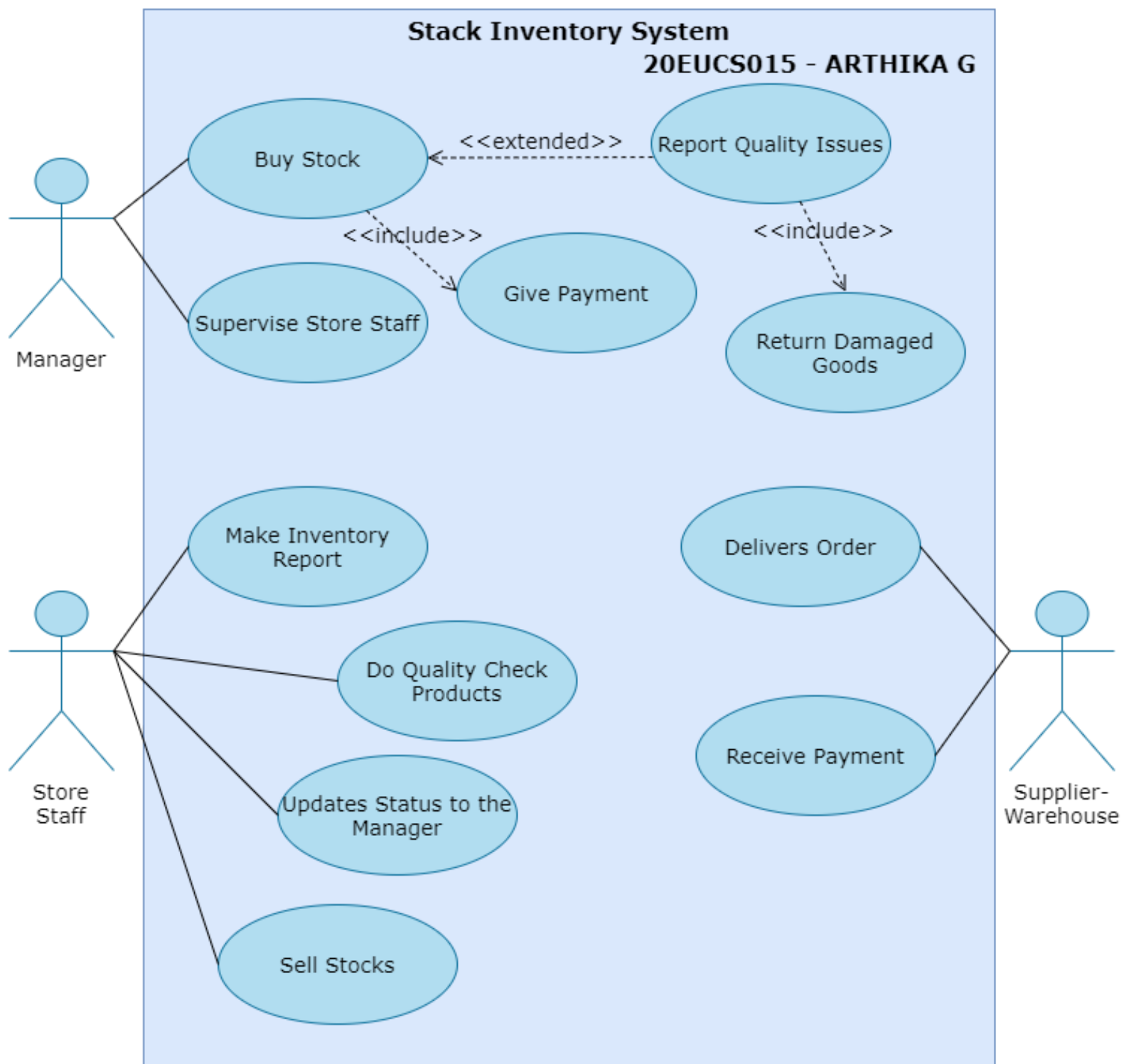
SOFTWARE USED

Draw.io

PROCEDURE

The UML Diagrams for ATM System is made possible using the Draw.io Software available online. Draw.io software consists of various graphing tools from which UML tools are chosen accordingly. By following the below mentioned steps UML diagrams are drawn.

- A new blank sheet is inserted into the work area by clicking on File -> New -> Blank Sheet -> OK.
- From the various graphing tools available at the left side of the work area UML tools is selected and the drop down arrow mark is clicked.
- A drop down list along with various shapes and functionalities of UML diagram pops out.
- An Actor is chosen and set as initial start of the diagram, from the actors various Objects, Relations, Functionalities etc, are added as required.
- Finally a frame is added with respect to the individual functionalities compiling the various objects under one Block of activity.
- The objects, relations, functions are interconnected as such it delivers a flaw less flow of execution.
- Finally the rendered Xml file is saved by clicking on File -> Save -> Drive in the respective Drive folder.
- The File could be saved in various Format such as XML, JPG, PNG etc.,

OUTPUT

The Screenshots of the **UML** diagrams for Stack Inventory System is attached below.

1. Use Case Diagram

Stack Inventory System
20EUCS015 - ARTHIKA G

Manager

Buy Stock

<<extended>>

Report Quality Issues

<<include>>

Give Payment

<<include>>

Supervise Store Staff

Return Damaged Goods

Make Inventory Report

Delivers Order

Do Quality Check Products

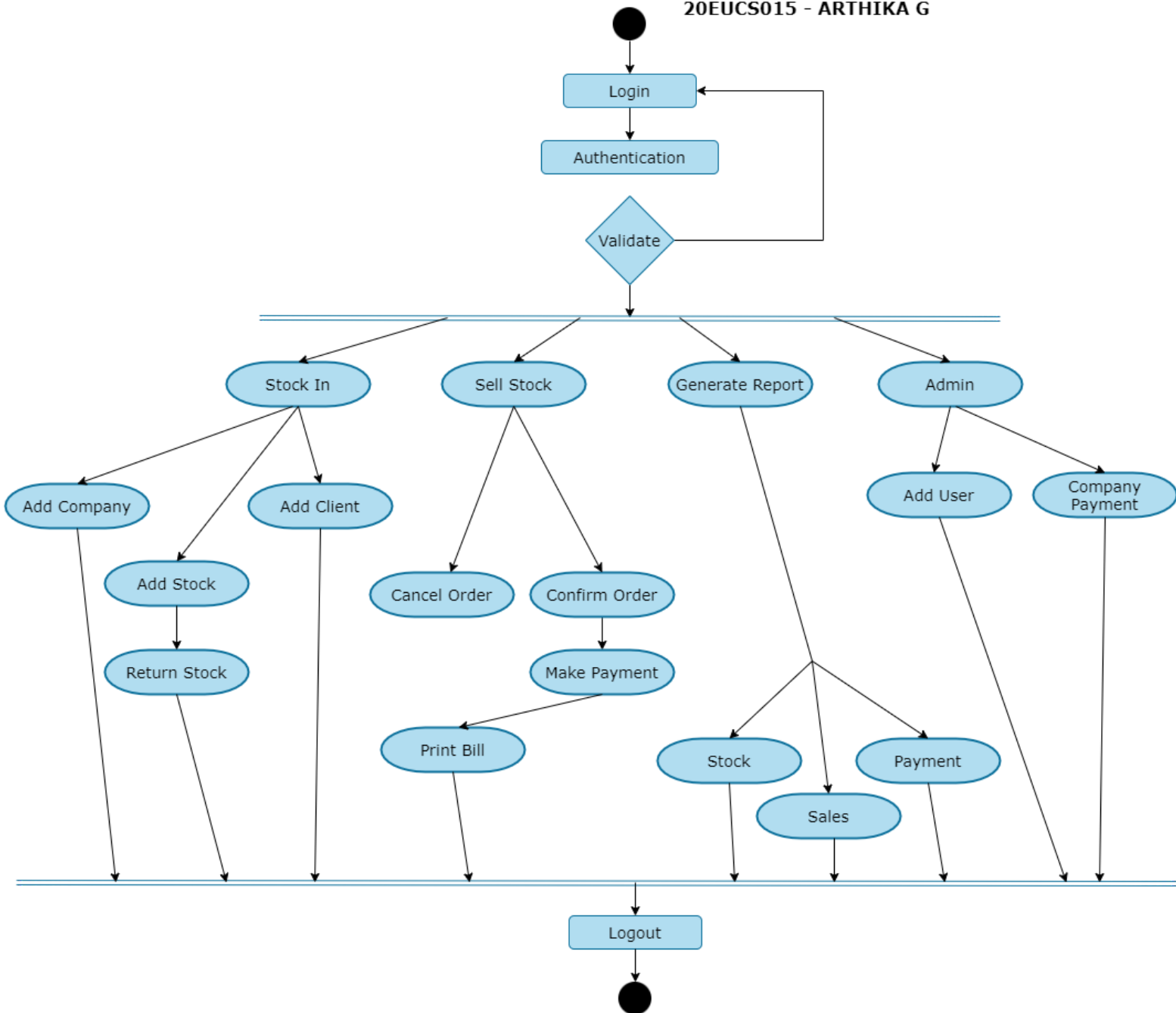Updates Status to the Manager

Receive Payment

Sell Stocks

Store Staff

Supplier-Warehouse

2. Activity Diagram

Stack Inventory System

20EUCS015 - ARTHIKA G

3. Sequence Diagram
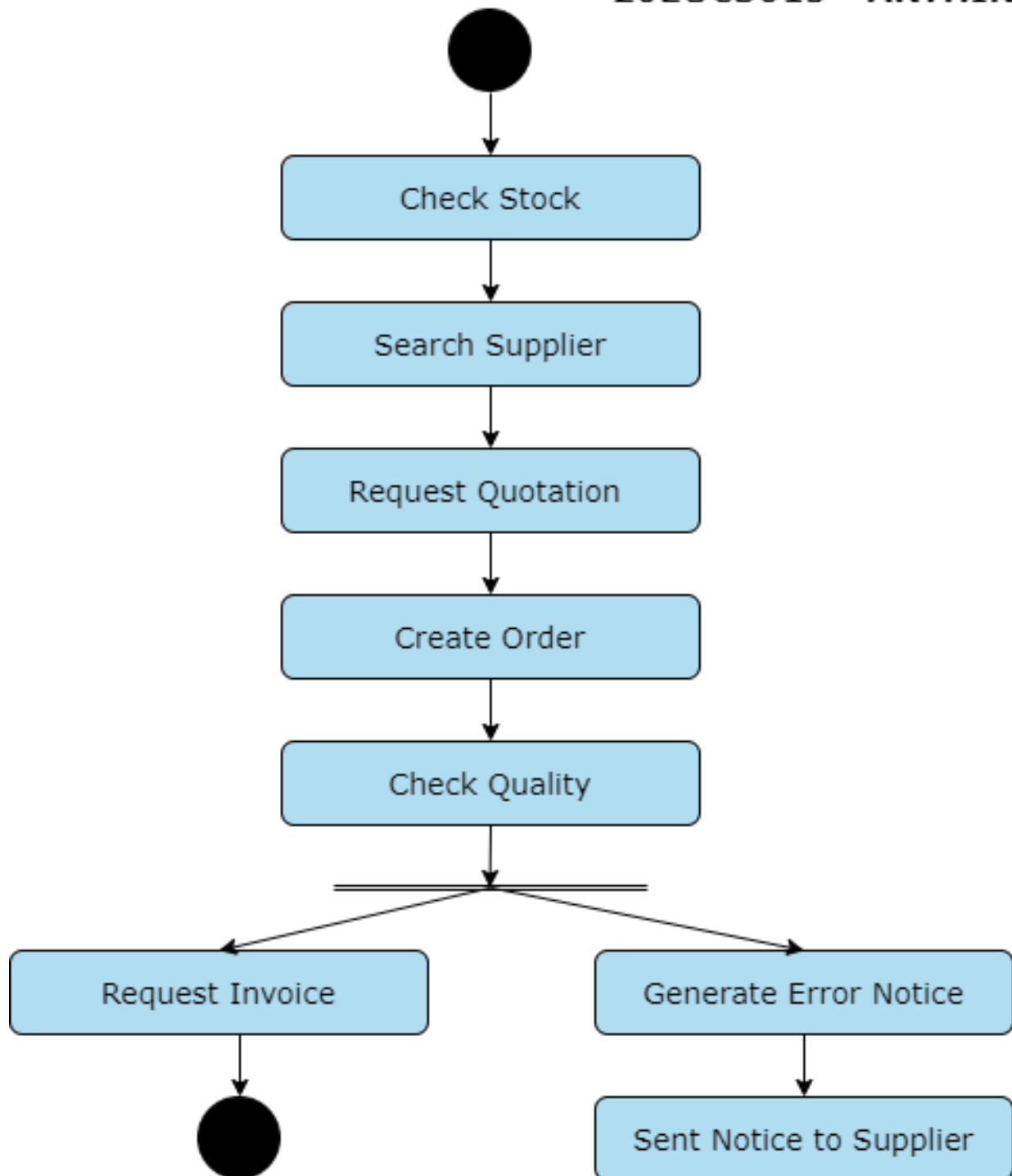
Stack Inventory System

20EUCS015 - ARTHIKA G

4. State Chart Diagram

RESULT

      Thus the required UML outputs for the Stack Inventory System is rendered as shown in the screenshots above

DFD DIAGRAM

EX: NO: 2   **NAME: ARTHIKA G**

DATE : 23/08/2021   **ROLL.NO: 20EUCS015**

AIM:

      To design and implement Vehicle Maintenance Depot using **Data Flow Diagram** of Level 0 and Level 1.

DFD-0

PROCEDURE:

STEP 1 : START
STEP 2 : Customer enters issues and problems in their vehicle
STEP 3 : System accept and forward the issues
STEP 4 : User gets help from the Mechanics and from the database
STEP 5 : Finally, get feedback of their vehicle from costumer
STEP 6 : STOP

DESCRIPTION:

    This is the Zero Level DFD of Vehicle Maintenance Depot, where we have elaborate the high level process of Vehicle Maintenance. It is a basic overview of the Vehicle Maintenance process being analysed or modelled. It's designed to be an at-a-glance view of place, customer and showing the system as a single level process. It should be understood by a wide audience .In Level Zero of DFD of Customer Service, we have describe the high flow of the Vehicle Maintenance Depot.

DIAGRAM:

DFD-1

PROCEDURE:

STEP 1 : START
STEP 2 : Customer enters issues and faults.
STEP 3 : System accept and forward the issue
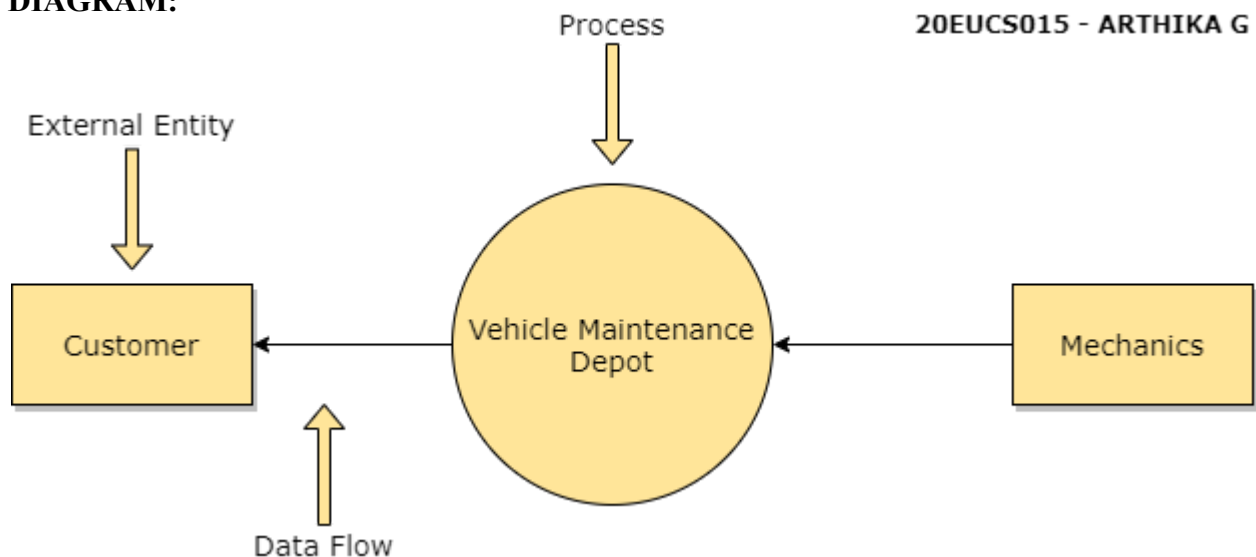**STEP 4** : User gets help from the Mechanics and from the database
STEP 5 : Finally, get feedback of their vehicle from costumer
STEP 6 : STOP

DESCRIPTION:

First Level DFD of Vehicle Maintenance Depot shows how the system is divided into subsystems, each of which deals with one or more of the data flows to or from an external agent and which together provide a lot of the functionality of the Vehicle Maintenance Depot as a whole. DFD Level 1 provides a more detailed breakout of pieces of the 1st Level 1 of DFD.

DIAGRAM:

20EUCS015 - ARTHIKA G
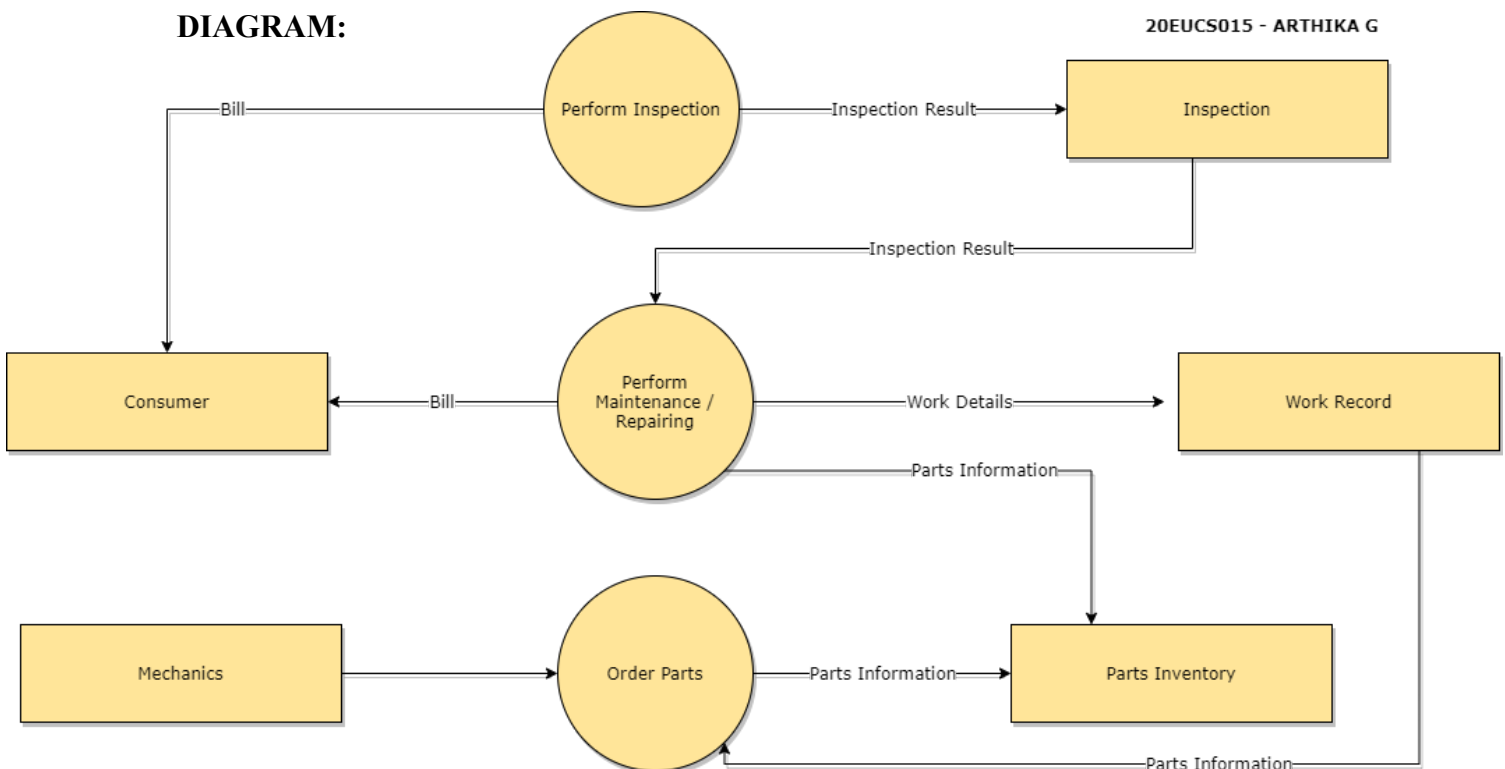
RESULT:

Vehicle Maintenance Depot using **Data Flow Diagram** of Level 0 and Level 1 is designed and implemented.

NAME: ARTHIKA G
ROLL NUMBER: 20EUCS015

Identify User Stories, Product Backlog and Sprint tasks

AIM:

To identify Product Backlog , Sprint Backlog for an Online Quiz Creation system
system scenariousing an online tool.

THEORY:

1. **Product Backlog:**

   A product backlog is a prioritized list of work for the development team that is derived from the roadmap and its requirements. The most important items are shown at the top of the product backlog so the team knows what to deliver first.

2. **Sprint Backlog:**

   A sprint backlog is the set of items that a cross-functional product team selects from its product backlog to work on during the upcoming sprint. Typically the team will agree on these items during its sprint planning session.

3. **User Story:**

   A user story is an informal, general explanation of a software feature written from the perspective of the end user or customer. The purpose of a user story is to articulate how a piece of work will deliver a particular value back to the customer.

Procedure:

1. Open Easy Backlog online tool. Sign up and click on create a new backlog.
2. Add the Product Backlog in order of Higher priorities. This creates the Product Backlog.
3. Add user story and Acceptance criteria to each of the Product Backlog added.
4. Set Sprint Velocity and points in accordance to the backlog to each and every product backlog.
5. Create Number Of sprints needed. Add the necessary Product Backlog to the user story. This creates the Sprint Backlog
6. Make the status of the product backlog as accepted to add it to the sprint backlog.

PRODUCT BACKLOG :

Online Quiz Creation									Rate: $60, Velocity: 5.0	
Theme	ID	User Story	Acceptance Criteria	Comments	Sprint	Status	Point	Cost	Days
Login	LOG1	As User I want to Enter my Email and Password So I can be verified	a) Email should be valid		Sprint 1	Accepted	2.0	$24	0.4
	LOG2	As Admin I want to Recieve student email and password So I can verify the User	a) Password must be verified		Sprint 1	Accepted	2.0	$24	0.4
		Total for theme 'Login'					4.0 points / $48 / 0.8 days		
User Name	USN1	As User I want to Enter my Name So I can open the quiz page	a) Should be only Alphabets and underscore		Sprint 2	Accepted	2.0	$24	0.4
	USN2	As Admin I want to Receive User Name So I can redirect to quiz page			Sprint 2	Accepted	2.0	$24	0.4
		Total for theme 'User Name'					4.0 points / $48 / 0.8 days		
Submit Quiz	SUQ1	As User I want to chosse the answers and submit the quiz So I can get the result	a) Should only submit after 5 mins b) Should attend all the questions		Sprint 3	Accepted	5.0	$60	1.0
		Total for theme 'Submit Quiz'					5.0 points / $60 / 1.0 day		
Quiz Marks	QUM1	As Admin I want to Publish the Mark So I can give results to user			Sprint 4	Accepted	5.0	$60	1.0
	QUM2	As User I want to Recive mark So I can know my mark			Sprint 4	Accepted	3.0	$36	0.6
		Total for theme 'Quiz Marks'					8.0 points / $96 / 1.6 days		
Quiz Status	QUS1	As Admin I want to Assign Status So I can give status to student	a) Status is either "pass" or "fail"		Sprint 3	Accepted	5.0	$60	1.0
	QUS2	As User I want to Recieve Status So I can check if i am eligible for the certificate			Sprint 4	Accepted	3.0	$36	0.6
	QUS3	As Admin I want to verify the answers So I can Assign marks			Sprint 4	Accepted	3.0	$36	0.6
		Total for theme 'Quiz Status'					11.0 points / $132 / 2.2 days		
Pass/Fail	PAF1	As User I want to get the quiz certificate So I can show my achievement	a) Status should be "pass"		Sprint 5	Accepted	3.0	$36	0.6
	PAF2	As User I want to retake this quiz So I can pass the quiz	a) Status should be "fail"		Sprint 5	Accepted	5.0	$60	1.0
		Total for theme 'Pass/Fail'					8.0 points / $96 / 1.6 days		
Database	DAT1	As Admin I want to Update Mark and Status to Database So I can Access if needed later			Sprint 5	Accepted		$0	0.0
		Total for theme 'Database'					0.0 points / $0 / 0.0 days		
Total for backlog 'Online Quiz Creation'							40.0 points / $480 / 8.0 days		

EXPLANATION:

1. User Email and Password
   a. User : Enter email and password
   b. Admin : Collect User email and verify password
2. User Name
   a. User : Enter Name
   b. Admin: Collect User Name
3. Submit Quiz
   a. User : Choose answers and Submit the quiz
   b. Admin : Verify the answers
4. Quiz Mark
   a. Admin : Assign Quiz Mark
   b. User : Receive Quiz Mark
5. Quiz Status
   a. Admin : Assign Pass if mark > 50% else assign Fail
   b. User : Receive Quiz Status
6. Pass / Fail
   a. User : Get the quiz certificate if status is Pass
   b. User : Retake the quiz after 24 hours if status is Fail
7. Database
   a. Admin : Update Mark and Status

SPRINTS:

SPRINT 1:

Online Quiz Creation arthikag

Filter | Snapshots | Export | Print | Settings

+ | Backlog | Stats | 5 | 4 | 3 | 2 | Sprint 1

Sprint total | 4.0 pts allocated | 450.0 pts expected | 4.0 pts completed

✓ **Sprint 1 stories (completed)** ⊢ expand

Backlog (unassigned stories)

You cannot move any stories into a completed sprint

ID: LOG1	Theme: Login	1. Email should be valid
Points: 2	As User	
🔒 Accepted	I want to Enter my Email and Password	
	So I can be verified	

ID: LOG2	Theme: Login	1. Password must be verified
Points: 2	As Admin	
🔒 Accepted	I want to Recieve student email and password	
	So I can verify the User	

Sprint start: 09/18/2021

Points in this sprint from the 2 stories: 4.0
Points expected in this sprint: 450.0
Points completed: 4.0

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SPRINT 2:

Online Quiz Creation arthikag

Filter | Snapshots | Export | Print | Settings

+ | Backlog | Stats | 5 | 4 | 3 | Sprint 2 | 1

Sprint total | 4.0 pts allocated | 450.0 pts expected | 4.0 pts completed

✓ **Sprint 2 stories (completed)** ⊢ expand

Backlog (unassigned stories)

You cannot move any stories into a completed sprint

ID: USN1	Theme: User Name	1. Should be only Alphabets and underscore
Points: 2	As User	
🔒 Accepted	I want to Enter my Name	
	So I can open the quiz page	

ID: USN2	Theme: User Name	
Points: 2	As Admin	
🔒 Accepted	I want to Receive User Name	
	So I can redirect to quiz page	

Sprint start: 10/11/2021

Points in this sprint from the 2 stories: 4.0
Points expected in this sprint: 450.0
Points completed: 4.0

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SPRINT 3:

Online Quiz Creation arthikag

Filter | Snapshots | Export | Print | Settings

+ | Backlog | Stats | 5 | 4 | Sprint 3 | 2 | 1

Sprint total | 10.0 pts allocated | 450.0 pts expected | 10.0 pts completed

✓ **Sprint 3 stories (completed)** ⊢ expand

Backlog (unassigned stories)

You cannot move any stories into a completed sprint

ID: SUQ1	Theme: Submit Quiz	1. Should only submit after 5 mins
Points: 5	As User	2. Should attend all the questions
🔒 Accepted	I want to chosse the answers and submit the quiz	
	So I can get the result	

ID: QUS1	Theme: Quiz Status	1. Status is either "pass" or "fail"
Points: 5	As Admin	
🔒 Accepted	I want to Assign Status	
	So I can give status to student	

Sprint start: 11/03/2021

Points in this sprint from the 2 stories: 10.0
Points expected in this sprint: 450.0
Points completed: 10.0

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SPRINT 4:

✓ **Sprint 4 stories (completed)**   ⊨ expand

Backlog (unassigned stories)

You cannot move any stories into a completed sprint

ID: QUM1 Points: 5 🔒 Accepted	Theme: Quiz Marks As Admin I want to Publish the Mark So I can give results to user
ID: QUM2 Points: 3 🔒 Accepted	Theme: Quiz Marks As User I want to Recive mark So I can know my mark
ID: QUS3 Points: 3 🔒 Accepted	Theme: Quiz Status As Admin I want to verify the answers So I can Assign marks
ID: QUS2 Points: 3 🔒 Accepted	Theme: Quiz Status As User I want to Recieve Status So I can check if i am eligible for the certificate

Sprint start: 11/26/2021

Points in this sprint from the 4 stories: 14.0
Points expected in this sprint: 450.0
Points completed: 14.0

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SPRINT 5:

✓ **Sprint 5 stories (completed)**   ⊨ expand

Backlog (unassigned stories)

You cannot move any stories into a completed sprint

ID: PAF1 Points: 3 🔒 Accepted	Theme: Pass/Fail As User I want to get the quiz certificate So I can show my achievement	1. Status should be "pass"
ID: PAF2 Points: 5 🔒 Accepted	Theme: Pass/Fail As User I want to retake this quiz So I can pass the quiz	1. Status should be "fail"
ID: DAT1 Points: 0 🔒 Accepted	Theme: Database As Admin I want to Update Mark and Status to Database So I can Access if needed later	

Sprint start: 12/20/2021

Points in this sprint from the 3 stories: 8.0
Points expected in this sprint: 450.0
Points completed: 8.0

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SNAPSHOTS:

Online Quiz Creation, 17 Sep 2021 13:02 | Agreed estimation to client, 17 Sep 2021 09:41

Rate: $60, Velocity: 5.0　　　　　　　　　　Rate: $60, Velocity: 5.0

ID	User Story	Acceptance Criteria	Comments	Score	Cost	Days	ID	User Story	Acceptance Criteria	Comments	Score	Cost	Days
Login (Code: LOG)							**Login** (Code: LOG)						
LOG1	As User I want to Enter my Email and Password So I can be verified	a) Email should be valid		2.0△	$24△	0.4△	LOG1	As User I want to Enter my Email and Password So I can be verified	b) Should start with 20eu*****		1.0▽	$12▽	0.2▽
LOG2	As Admin I want to Recieve student email and password So I can verify the User	a) Password must be verified		2.0△	$24△	0.4△	LOG2	As Admin I want to Recieve student email and password So I can verify the User	a) Password must be verified		1.0▽	$12▽	0.2▽
	Login totals: **4.0 points△ / $48△ / 0.8 days△**							Login totals: **2.0 points▽ / $24▽ / 0.4 days▽**					
User Name (Code: USN)							**User Name** (Code: USN)						
USN1	As User I want to Enter my Name So I can open the quiz page	a) Should be only Alphabets and underscore		2.0△	$24△	0.4△	USN1	As User I want to Enter my Name So I can open the quiz page	b) Should be only Alphabets		1.0▽	$12▽	0.2▽
USN2	As Admin I want to Receive User Name So I can redirect to quiz page			2.0△	$24△	0.4△	USN2	As Admin I want to Receive User Name So I can redirect to quiz page			1.0▽	$12▽	0.2▽
	User Name totals: **4.0 points△ / $48△ / 0.8 days△**							User Name totals: **2.0 points▽ / $24▽ / 0.4 days▽**					
Submit Quiz (Code: SUQ)							**Submit Quiz** (Code: SUQ)						
SUQ1	As User I want to chosse the answers and submit the quiz So I can get the result	a) Should only submit after 5 mins b) Should attend all the questions		5.0	$60	1.0	SUQ1	As User I want to chosse the answers and submit the quiz So I can get the result	a) Should only submit after 5 mins		5.0	$60	1.0
	Submit Quiz totals: **5.0 points / $60 / 1.0 days**							Submit Quiz totals: **5.0 points / $60 / 1.0 days**					
Quiz Marks (Code: QUM)							**Quiz Marks** (Code: QUM)						
QUM1	As Admin I want to Publish the Mark So I can give results to user			5.0	$60	1.0	QUM1	As Admin I want to Publish the Mark So I can give results to user			5.0	$60	1.0
QUM2	As User I want to Recive mark So I can know my mark			3.0	$36	0.6	QUM2	As User I want to Recive mark So I can know my mark			3.0	$36	0.6
	Quiz Marks totals: **8.0 points / $96 / 1.6 days**							Quiz Marks totals: **8.0 points / $96 / 1.6 days**					

Left Table

Quiz Status (Code: QUS)

QUS1	As Admin I want to Assign Status So I can give status to student	a) Status is either "pass" or "fail"	5.0	$60	1.0
QUS2	As User I want to Recieve Status So I can check if i am eligible for the certificate		3.0	$36	0.6
QUS3	As Admin I want to verify the answers So I can Assign marks		3.0	$36	0.6
	Quiz Status totals: 11.0 points / $132 / 2.2 days				

Pass/Fail (Code: PAF)

PAF1	As User I want to get the quiz certificate So I can show my achievement	a) Status should be "pass"	3.0	$36	0.6
PAF2	As User I want to retake this quiz So I can pass the quiz	a) Status should be "fail"	5.0△	$60△	1.0△
	Pass/Fail totals: 8.0 points△ / $96△ / 1.6 days△				

Database (Code: DAT)

DAT1	As Admin I want to Update Mark and Status to Database So I can Access if needed later			$0	0.0
	Database totals: 0.0 points / $0 / 0.0 days				
	Totals: 40.0 points△ / $480△ / 8.0 days△				

Right Table

Quiz Status (Code: QUS)

QUS1	As Admin I want to Assign Status So I can give status to student	a) Status is either "pass" or "fail"	5.0	$60	1.0
QUS2	As User I want to Recieve Status So I can check if i am eligible for the certificate		3.0	$36	0.6
QUS3	As Admin I want to verify the answers So I can Assign marks		3.0	$36	0.6
	Quiz Status totals: 11.0 points / $132 / 2.2 days				

Pass/Fail (Code: PAF)

PAF1	As User I want to get the quiz certificate So I can show my achievement	a) Status should be "pass"	3.0	$36	0.6
PAF2	As User I want to retake this quiz So I can pass the quiz	a) Status should be "fail" b) Should only retake after 24 hours	3.0▽	$36▽	0.6▽
	Pass/Fail totals: 6.0 points▽ / $72▽ / 1.2 days▽				

Database (Code: DAT)

DAT1	As Admin I want to Update Mark and Status to Database So I can Access if needed later			$0	0.0
	Database totals: 0.0 points / $0 / 0.0 days				
	Totals: 34.0 points▽ / $408▽ / 6.8 days▽				

Result:

Product Backlog , Sprint Backlog for an Online Quiz Creation system

system scenario usingan online tool were identified and created successfully .

NAME: ARTHIKA G
Roll.NO:20EUCS015

ESTIMATION FOR IDENTIFIED USER STORIES

AIM:

To identify User Story and estimate the user story for an Online Quiz
Creation system system scenariousing an online tool.

THEORY:

1. User Story

A user story is an informal, general explanation of a software feature written from the perspective of the end user or customer. The purpose of a user story is to articulate how a piece of work will deliver a particular value back to the customer.

2. Burn Down Charts :

A burn down chart is a graphical representation of work left to do versus time. The outstanding work is often on the vertical axis, with time along the horizontal.

3. Sprint Velocity:

A Velocity is a measure of the amount of work a Team can tackle during a single Sprint and is the key metric in Scrum. Velocity is calculated at the end of the Sprint by totaling the Points for all fully completed User Stories.

Procedure:

1. Open Easy Backlog online tool. Sign up and click on create a new backlog.
2. Add the Product Backlog in order of Higher priorities. This creates the Product Backlog.
3. Add user story and Acceptance criteria to each of the Product Backlog added.
4. Set Sprint Velocity and points in accordance to the backlog to each and every product backlog.
5. Create Number Of sprints needed. Add the necessary Product Backlog to the user story. This creates the Sprint Backlog
6. Make the status of the product backlog as accepted to add it to the sprint backlog..
7. Click on statistics .Here you can find the Burn down, Burn up charts and Velocity of sprints.

BURNDOWN CHART:

Burn down

Burn up

Velocity of completed sprints
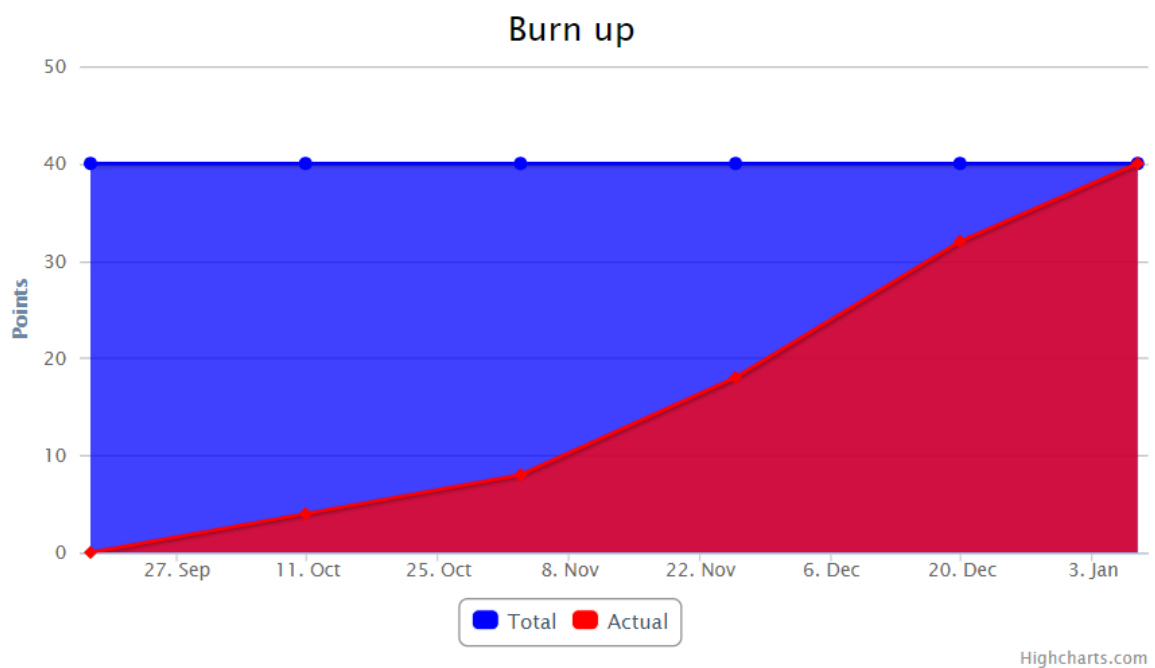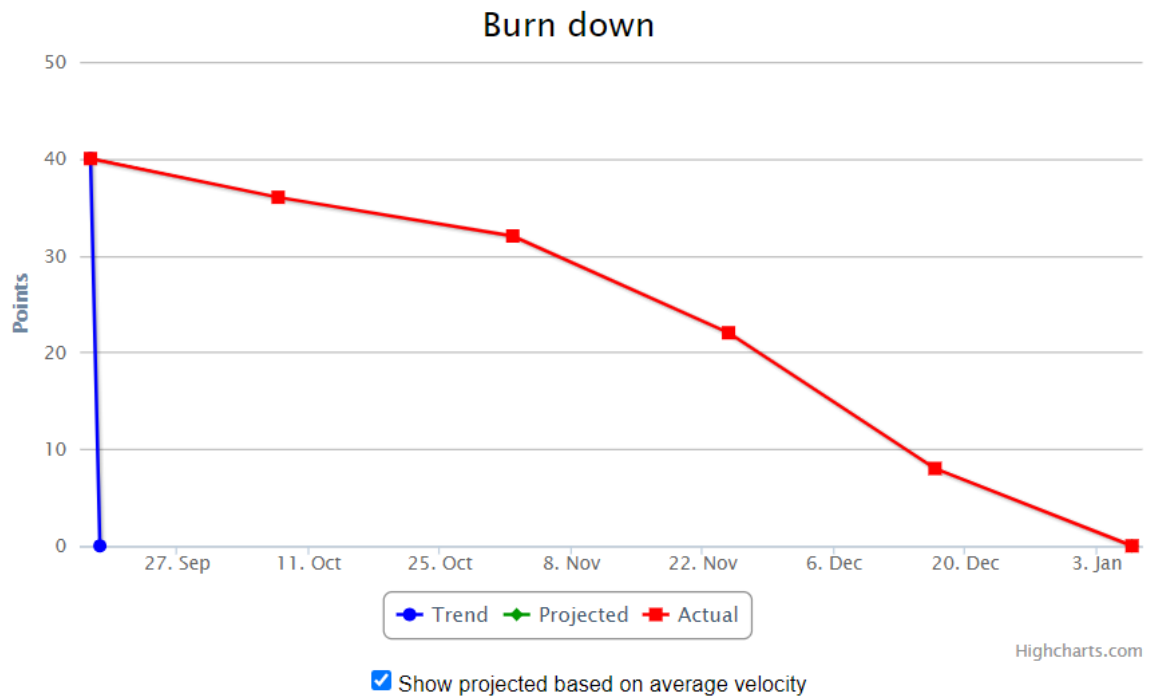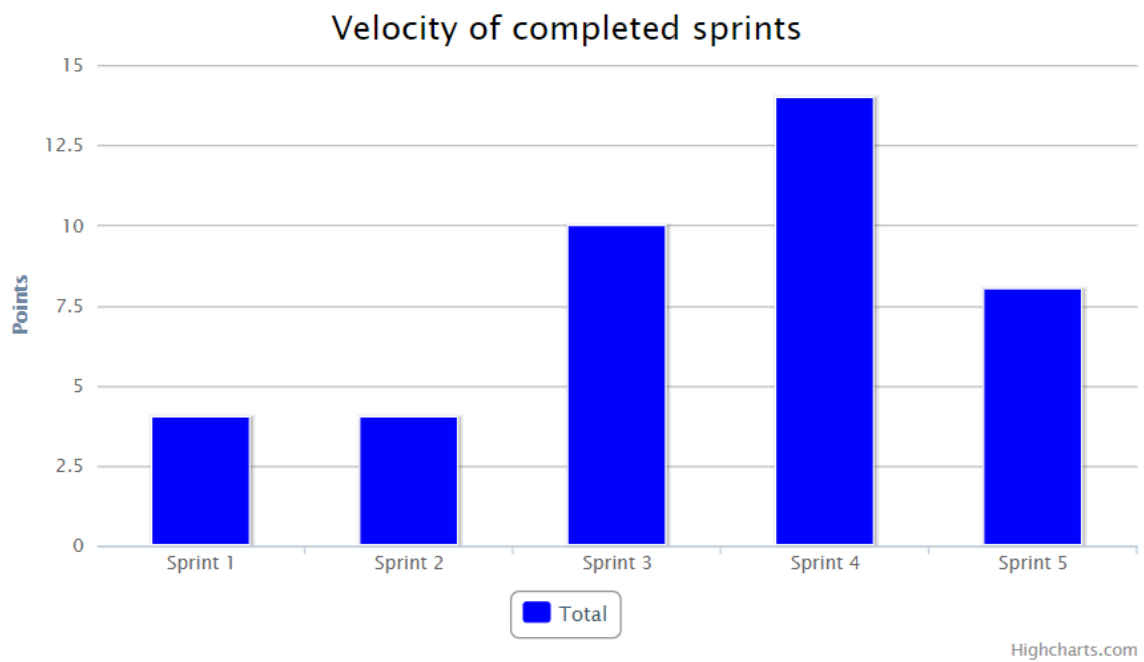
RESULT:

User story for an Online Quiz Creation system
system scenario using an online tool was created andestimated successfully.

EX.NO: 5
DATE:11.09.2021

NAME: ARTHIKA G
Roll.NO:20EUCS015

USER STORIES, SPRINT SCHEDULE AND SPRINT TASKS

AIM:

   To Fill user stories, sprint schedule and sprint tasks for an Online Quiz Creation system scenariousing an online tool.

THEORY:

1. User Story

A user story is an informal, general explanation of a software feature written from the perspective of the end user or customer. The purpose of a user story is to articulate how a piece of work will deliver a particular value back to the customer.

Procedure:

1.   Open Easy Backlog online tool. Sign up and click on create a new backlog.
2.   Add the Product Backlog in order of Higher priorities. This creates the Product Backlog.
3.   Add user story and Acceptance criteria to each of the Product Backlog added.
4.   Set Sprint Velocity and points in accordance to the backlog to each and every product backlog.
5.   Create Number Of sprints needed. Add the necessary Product Backlog to the user story. This creates the Sprint Backlog
6. Make the status of the product backlog as accepted to add it to the sprint backlog..
7. Click on statistics .Here you can find the Burn down, Burn up charts and Velocity of sprints.

USER STORIES:

Backlog: Online Quiz Creation	**LOG1**
Theme: Login	2 / 2

As **User**
I want to **Enter my Email and Password**
So I can **be verified**

Backlog: Online Quiz Creation	**LOG2**
Theme: Login	2 / 2

As **Admin**
I want to **Recieve student email and password**
So I can **verify the User**

Backlog: Online Quiz Creation	**USN1**
Theme: User Name	2 / 2

As **User**
I want to **Enter my Name**
So I can **open the quiz page**

Backlog: Online Quiz Creation	**USN2**
Theme: User Name	2 / 2

As **Admin**
I want to **Receive User Name**
So I can **redirect to quiz page**

Acceptance Criteria **USN1**
a) Should be only Alphabets and underscore

Acceptance Criteria **USN2**

Acceptance Criteria **LOG1**
a) Email should be valid

Acceptance Criteria **LOG2**
a) Password must be verified

Backlog: Online Quiz Creation	**SUQ1**
Theme: Submit Quiz	5 / 5

As **User**
I want to **chosse the answers and submit the quiz**
So I can **get the result**

Backlog: Online Quiz Creation	**QUM1**
Theme: Quiz Marks	5 / 5

As **Admin**
I want to **Publish the Mark**
So I can **give results to user**

Backlog: Online Quiz Creation	**QUM2**
Theme: Quiz Marks	3 / 3

As **User**
I want to **Recive mark**
So I can **know my mark**

Backlog: Online Quiz Creation	**QUS1**
Theme: Quiz Status	5 / 5

As **Admin**
I want to **Assign Status**
So I can **give status to student**

Acceptance Criteria　　　　**QUM2**

Acceptance Criteria　　　　**QUS1**
a) Status is either "pass" or "fail"

Acceptance Criteria　　　　**SUQ1**
a) Should only submit after 5 mins
b) Should attend all the questions

Acceptance Criteria　　　　**QUM1**

Backlog: Online Quiz Creation	**QUS2**	Backlog: Online Quiz Creation	**QUS3**
Theme: Quiz Status	3 / 3	Theme: Quiz Status	3 / 3

As **User**
I want to **Recieve Status**
So I can **check if i am eligible for the certificate**

As **Admin**
I want to **verify the answers**
So I can **Assign marks**

Backlog: Online Quiz Creation	**PAF1**	Backlog: Online Quiz Creation	**PAF2**
Theme: Pass/Fail	3 / 3	Theme: Pass/Fail	5 / 5

As **User**
I want to **get the quiz certificate**
So I can **show my achievement**

As **User**
I want to **retake this quiz**
So I can **pass the quiz**

Acceptance Criteria   **PAF1**
a) Status should be "pass"

Acceptance Criteria   **PAF2**
a) Status should be "fail"

Acceptance Criteria   **QUS2**

Acceptance Criteria   **QUS3**

Backlog: Online Quiz Creation	DAT1
Theme: Database	

As **Admin**
I want to **Update Mark and Status to Database**
So I can **Access if needed later**

Acceptance Criteria	DAT1

Online Quiz Creation   Rate: $60, Velocity: 5.0

Theme	ID	User Story	Acceptance Criteria	Comments	Sprint	Status	Point	Cost	Days
Login	LOG1	As User I want to Enter my Email and Password So I can be verified	a) Email should be valid		Sprint 1	Accepted	2.0	$24	0.4
	LOG2	As Admin I want to Recieve student email and password So I can verify the User	a) Password must be verified		Sprint 1	Accepted	2.0	$24	0.4
		Total for theme 'Login'				**4.0 points / $48 / 0.8 days**			
User Name	USN1	As User I want to Enter my Name So I can open the quiz page	a) Should be only Alphabets and underscore		Sprint 2	Accepted	2.0	$24	0.4
	USN2	As Admin I want to Receive User Name So I can redirect to quiz page			Sprint 2	Accepted	2.0	$24	0.4
		Total for theme 'User Name'				**4.0 points / $48 / 0.8 days**			
Submit Quiz	SUQ1	As User I want to chosse the answers and submit the quiz So I can get the result	a) Should only submit after 5 mins b) Should attend all the questions		Sprint 3	Accepted	5.0	$60	1.0
		Total for theme 'Submit Quiz'				**5.0 points / $60 / 1.0 day**			
Quiz Marks	QUM1	As Admin I want to Publish the Mark So I can give results to user			Sprint 4	Accepted	5.0	$60	1.0
	QUM2	As User I want to Recive mark So I can know my mark			Sprint 4	Accepted	3.0	$36	0.6
		Total for theme 'Quiz Marks'				**8.0 points / $96 / 1.6 days**			
Quiz Status	QUS1	As Admin I want to Assign Status So I can give status to student	a) Status is either "pass" or "fail"		Sprint 3	Accepted	5.0	$60	1.0
	QUS2	As User I want to Recieve Status So I can check if i am eligible for the certificate			Sprint 4	Accepted	3.0	$36	0.6
	QUS3	As Admin I want to verify the answers So I can Assign marks			Sprint 4	Accepted	3.0	$36	0.6
		Total for theme 'Quiz Status'				**11.0 points / $132 / 2.2 days**			
Pass/Fail	PAF1	As User I want to get the quiz certificate So I can show my achievement	a) Status should be "pass"		Sprint 5	Accepted	3.0	$36	0.6
	PAF2	As User I want to retake this quiz So I can pass the quiz	a) Status should be "fail"		Sprint 5	Accepted	5.0	$60	1.0
		Total for theme 'Pass/Fail'				**8.0 points / $96 / 1.6 days**			
Database	DAT1	As Admin I want to Update Mark and Status to Database So I can Access if needed later			Sprint 5	Accepted		$0	0.0
		Total for theme 'Database'				**0.0 points / $0 / 0.0 days**			
Total for backlog 'Online Quiz Creation'						**40.0 points / $480 / 8.0 days**			

SNAPSHOTS:

Online Quiz Creation, 17 Sep 2021 13:02

Rate: $60, Velocity: 5.0

ID	User Story	Acceptance Criteria	Comments	Score	Cost	Days
Login (Code: LOG)						
LOG1	As User I want to Enter my Email and Password So I can be verified	a) Email should be valid		2.0△	$24△	0.4△
LOG2	As Admin I want to Recieve student email and password So I can verify the User	a) Password must be verified		2.0△	$24△	0.4△
	Login totals: **4.0 points△ / $48△ / 0.8 days△**					
User Name (Code: USN)						
USN1	As User I want to Enter my Name So I can open the quiz page	a) Should be only Alphabets and underscore		2.0△	$24△	0.4△
USN2	As Admin I want to Receive User Name So I can redirect to quiz page			2.0△	$24△	0.4△
	User Name totals: **4.0 points△ / $48△ / 0.8 days△**					
Submit Quiz (Code: SUQ)						
SUQ1	As User I want to chosse the answers and submit the quiz So I can get the result	a) Should only submit after 5 mins b) Should attend all the questions		5.0	$60	1.0
	Submit Quiz totals: **5.0 points / $60 / 1.0 days**					
Quiz Marks (Code: QUM)						
QUM1	As Admin I want to Publish the Mark So I can give results to user			5.0	$60	1.0
QUM2	As User I want to Recive mark So I can know my mark			3.0	$36	0.6
	Quiz Marks totals: **8.0 points / $96 / 1.6 days**					

Agreed estimation to client, 17 Sep 2021 09:41

Rate: $60, Velocity: 5.0

ID	User Story	Acceptance Criteria	Comments	Score	Cost	Days
Login (Code: LOG)						
LOG1	As User I want to Enter my Email and Password So I can be verified	b) Should start with 20eu*****		1.0▽	$12▽	0.2▽
LOG2	As Admin I want to Recieve student email and password So I can verify the User	a) Password must be verified		1.0▽	$12▽	0.2▽
	Login totals: **2.0 points▽ / $24▽ / 0.4 days▽**					
User Name (Code: USN)						
USN1	As User I want to Enter my Name So I can open the quiz page	b) Should be only Alphabets		1.0▽	$12▽	0.2▽
USN2	As Admin I want to Receive User Name So I can redirect to quiz page			1.0▽	$12▽	0.2▽
	User Name totals: **2.0 points▽ / $24▽ / 0.4 days▽**					
Submit Quiz (Code: SUQ)						
SUQ1	As User I want to chosse the answers and submit the quiz So I can get the result	a) Should only submit after 5 mins		5.0	$60	1.0
	Submit Quiz totals: **5.0 points / $60 / 1.0 days**					
Quiz Marks (Code: QUM)						
QUM1	As Admin I want to Publish the Mark So I can give results to user			5.0	$60	1.0
QUM2	As User I want to Recive mark So I can know my mark			3.0	$36	0.6
	Quiz Marks totals: **8.0 points / $96 / 1.6 days**					

Quiz Status (Code: QUS)

QUS1	As Admin I want to Assign Status So I can give status to student	a) Status is either "pass" or "fail"		5.0	$60	1.0
QUS2	As User I want to Recieve Status So I can check if i am eligible for the certificate			3.0	$36	0.6
QUS3	As Admin I want to verify the answers So I can Assign marks			3.0	$36	0.6
	Quiz Status totals: 11.0 points / $132 / 2.2 days					

Pass/Fail (Code: PAF)

PAF1	As User I want to get the quiz certificate So I can show my achievement	a) Status should be "pass"		3.0	$36	0.6
PAF2	As User I want to retake this quiz So I can pass the quiz	a) Status should be "fail"		5.0△	$60△	1.0△
	Pass/Fail totals: 8.0 points△ / $96△ / 1.6 days△					

Database (Code: DAT)

DAT1	As Admin I want to Update Mark and Status to Database So I can Access if needed later				$0	0.0
	Database totals: 0.0 points / $0 / 0.0 days					
	Totals: **40.0 points△ / $480△ / 8.0 days△**					

Quiz Status (Code: QUS)

QUS1	As Admin I want to Assign Status So I can give status to student	a) Status is either "pass" or "fail"		5.0	$60	1.0
QUS2	As User I want to Recieve Status So I can check if i am eligible for the certificate			3.0	$36	0.6
QUS3	As Admin I want to verify the answers So I can Assign marks			3.0	$36	0.6
	Quiz Status totals: 11.0 points / $132 / 2.2 days					

Pass/Fail (Code: PAF)

PAF1	As User I want to get the quiz certificate So I can show my achievement	a) Status should be "pass"		3.0	$36	0.6
PAF2	As User I want to retake this quiz So I can pass the quiz	a) Status should be "fail" b) Should only retake after 24 hours		3.0▽	$36▽	0.6▽
	Pass/Fail totals: 6.0 points▽ / $72▽ / 1.2 days▽					

Database (Code: DAT)

DAT1	As Admin I want to Update Mark and Status to Database So I can Access if needed later				$0	0.0
	Database totals: 0.0 points / $0 / 0.0 days					
	Totals: **34.0 points▽ / $408▽ / 6.8 days▽**					

RESULT:

User story sprint schedule and sprint tasks for an Online Quiz Creation system

NAME: ARTHIKA G
Roll.NO: 20EUCS015

UNIT TESTING

AIM:

To write unit tests aligned to xUnit framework for TDD.

THEORY:

1. Unit Testing

Unit testing is a software testing method by which individual units of source code—sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures—are tested to determine whether they are fit for use.

Procedure:

1. Open a Java IDE, and create a new package.
2. Create a class and write a code for the given problem.
3. Create a new JUnit Test Case and add it to the build path.
4. Create appropriate objects and call the required functions.
5. Pass the test case as a parameter in the built in assertEquals function .
6. Save the program and run it. By the Left hand side you can see the test case results (the count of Runs or Errors or Failures).

PROGRAMS

Reverse String :

```
Package javaclass;

Public class Reversestring{
    String str="Happy";

    StringBuilder sb=new StringBuilder(str);
    return sb.reverse().toString();
}}
```

TEST CASE PROGRAM:

```
Package javaclass;

Import static org.Junit.Assert.* ;
Public class check{

Public void test(){
assertEquals("yppaH",reversestring.rev());}}
```

RUNS:
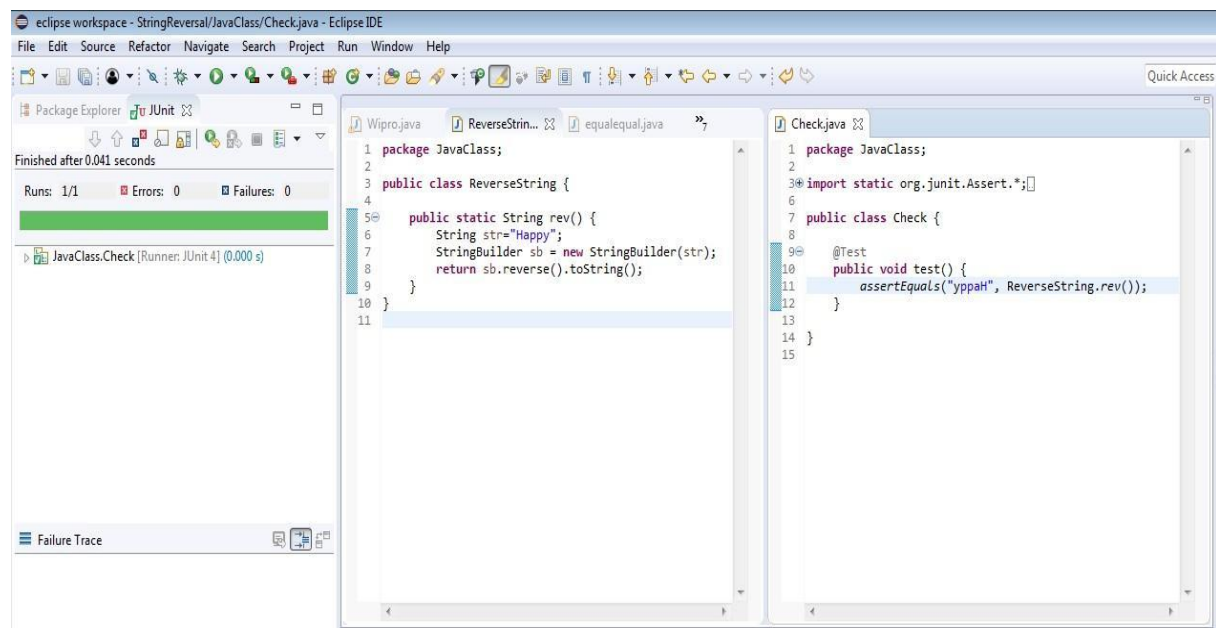
FAILS:
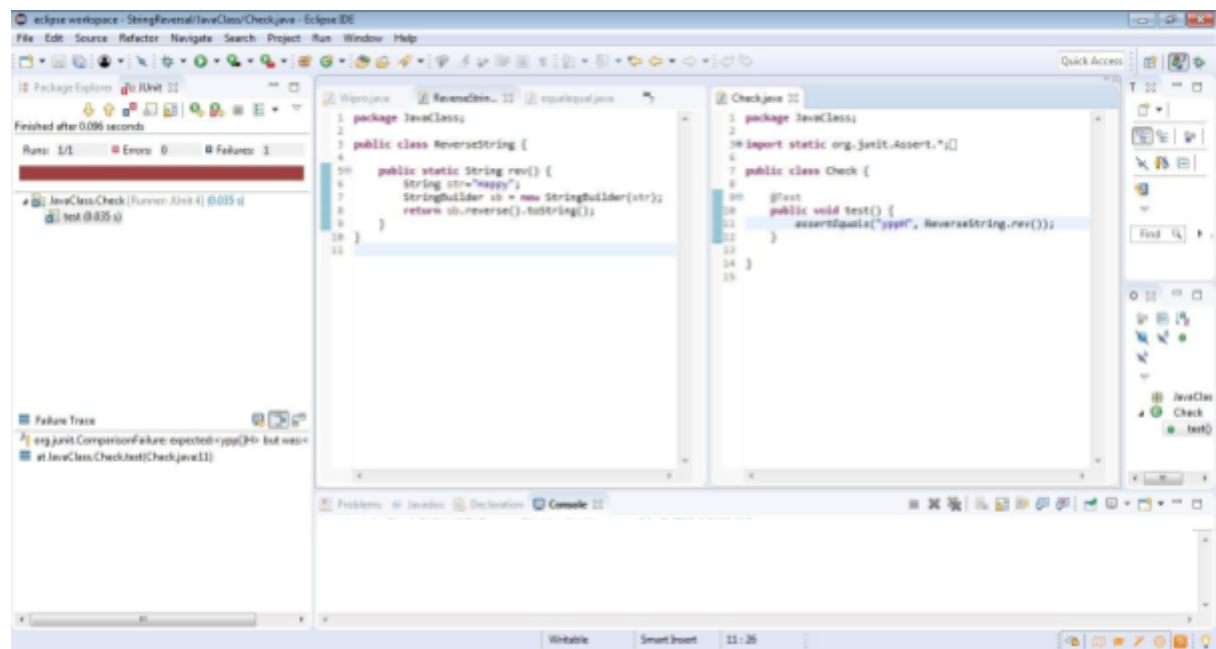
RESULT:

Unit tests aligned to xUnit framework for TDD were written and tested successfully.

NAME: ARTHIKA G
Roll.NO: 20EUCS015

REFACTORING

AIM:

To Refactor a given design for next sprint requirements..

THEORY:

1. Refactoring:

Refactoring is the process of clarifying and simplifying the design of existing code, without changing its behavior. Agile teams are maintaining and extending their code a lot from iteration to iteration, and without continuous refactoring, this is hard to do.

Procedure:

1. Open a Java IDE, and create a new package.
2. Create a class and write a code for the given problem.
3. Create a new JUnit Test Case and add it to the build path.
4. Create appropriate objects and call the required functions.
5. Pass the test case as a parameter in the built in assertEquals function .
6. Save the program and run it. By the Left hand side you can see the test case results (the count of Runs or Errors or Failures).

PROGRAMS

STRING EQUIVALENCE:

```
Package javaclass;
Public class strequals{

Public static String equal(String str1,String str2){
  if(str1.equals(str2)){

    return "yes";

  }
else{

  return "no";

}

}
```

TEST CASE PROGRAM:
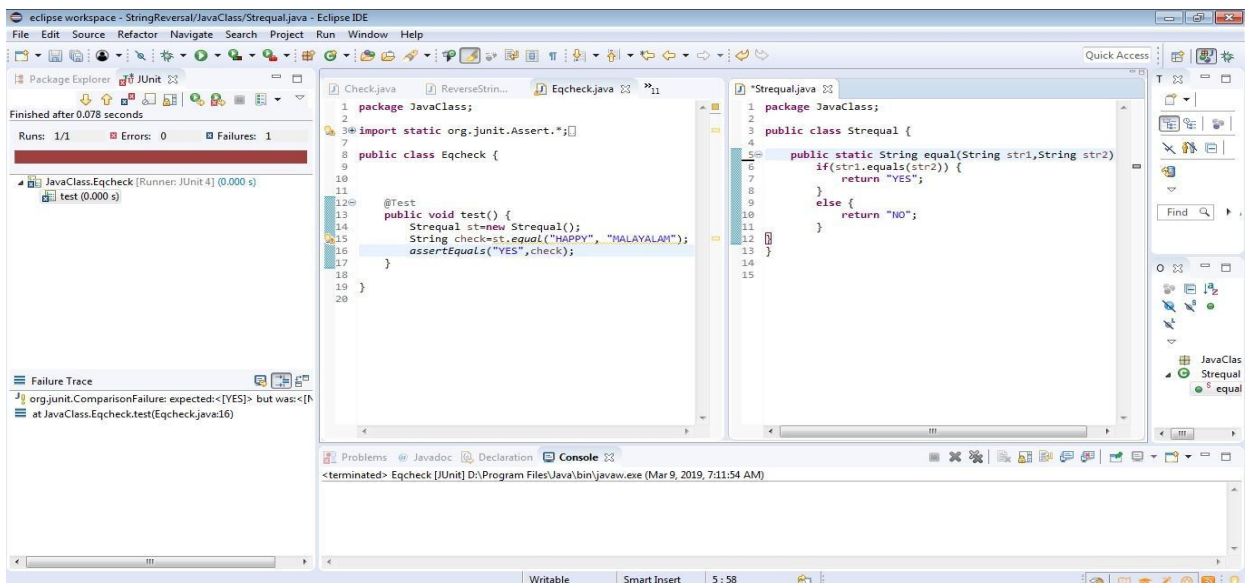
```
Package javaclass;

Import static org.Junit.Assert.* ;
Public class check{

Public void test(){
Stringequal s=new strequal();

String b=s.b.equal("Happy", "Malayalam");

assertEquals("yes",b);}}
```

RUNS:
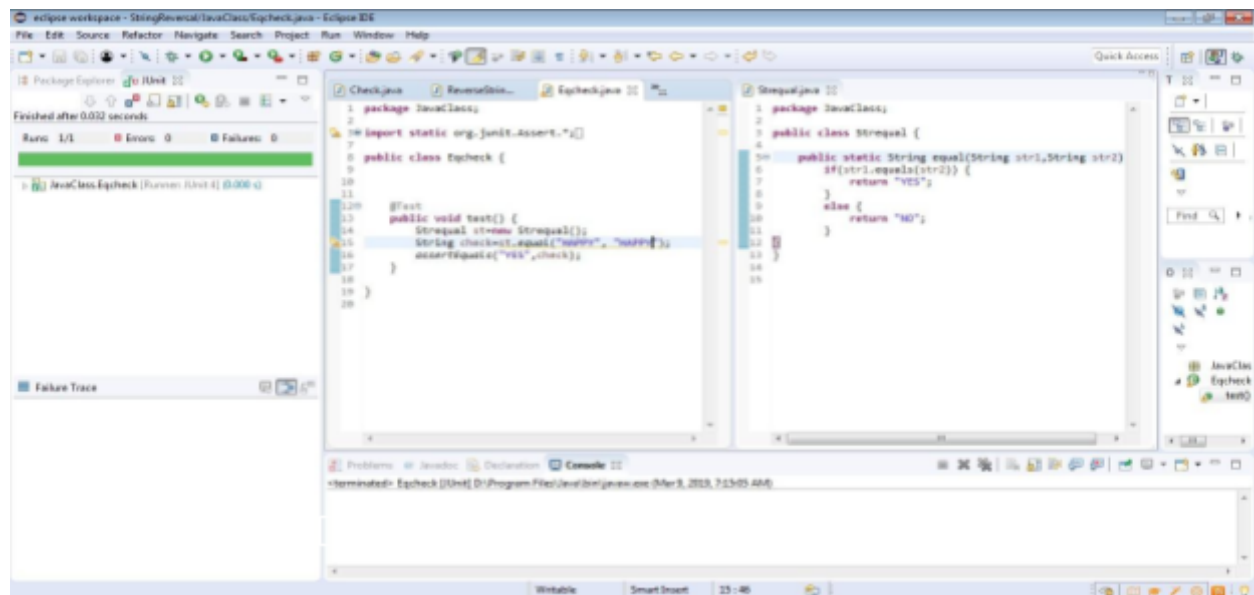
FAILS:

RESULT:

A given design for next sprint requirements was refactoring

NAME: ARTHIKA G
Roll.NO: 20EUCS015

CONTINOUS INTEGRATION- AUTOMATED TOOLS

AIM:

To execute continuous integration using a automated tool such as Jenkins.

THEORY:

Continuous Integration:

Continuous integration (CI) is the practice of automating the integration of code changes from multiple contributors into a single software project. The CI process is comprised of automatic tools that assert the new code's correctness before integration. A source code version control system is the crux of the CI process.

Procedure:

1. Open a Java IDE, and create a new package.
2. Create a class and write a code for the given problem.
3. Create a new JUnit Test Case and add it to the build path.
4. Create appropriate objects and call the required functions.
5. Pass the test case as a parameter in the built in assertEquals function .
6. Save the program and run it. By the Left hand side you can see the test case results (the count of Runs or Errors or Failures).
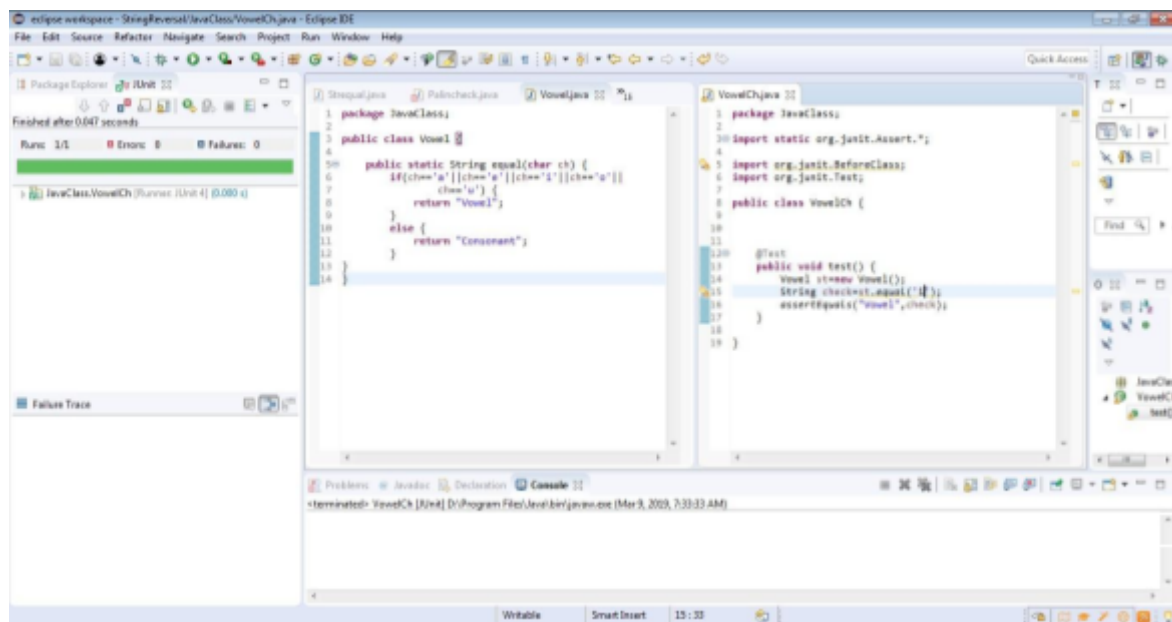
PROGRAMS

ALPHABET CHECK:

```
Package javaclass;
Public class vowel{
Public static String equal(char ch){
  if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u' ){
  return "vowel";}
  else{
    return "consonant";
}}
```
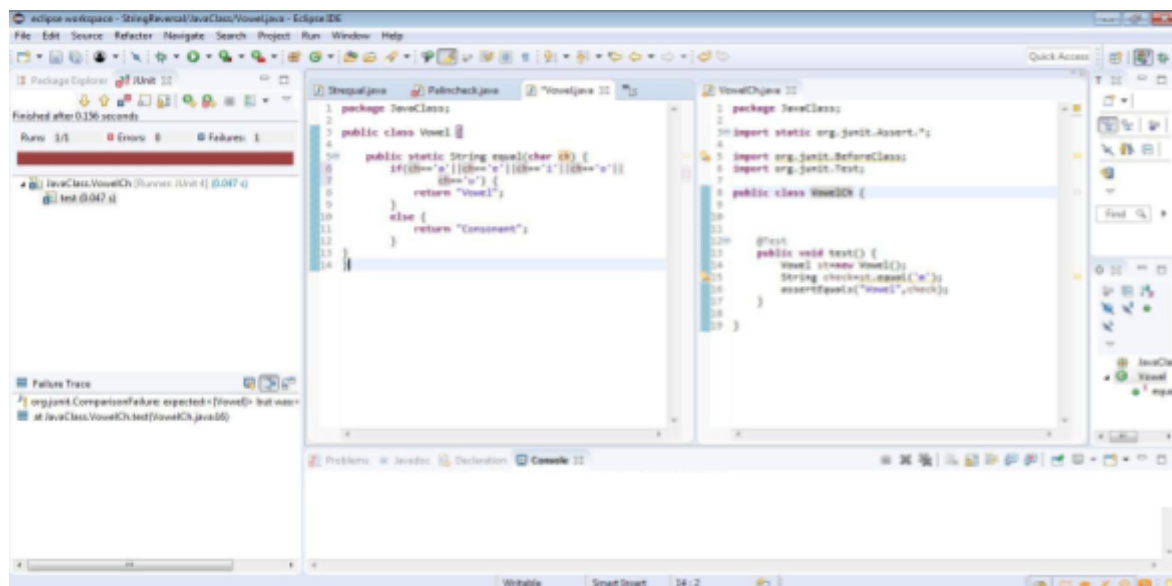
TEST CASE PROGRAM:

```
Package javaclass;

import static org.Junit.Assert.* ;
Public class check

{

    Public void test() {
    vowel s=new vowel();
    String b=s.b.equal("a");
    assertEquals("yes",b);

}}
```

RUNS:

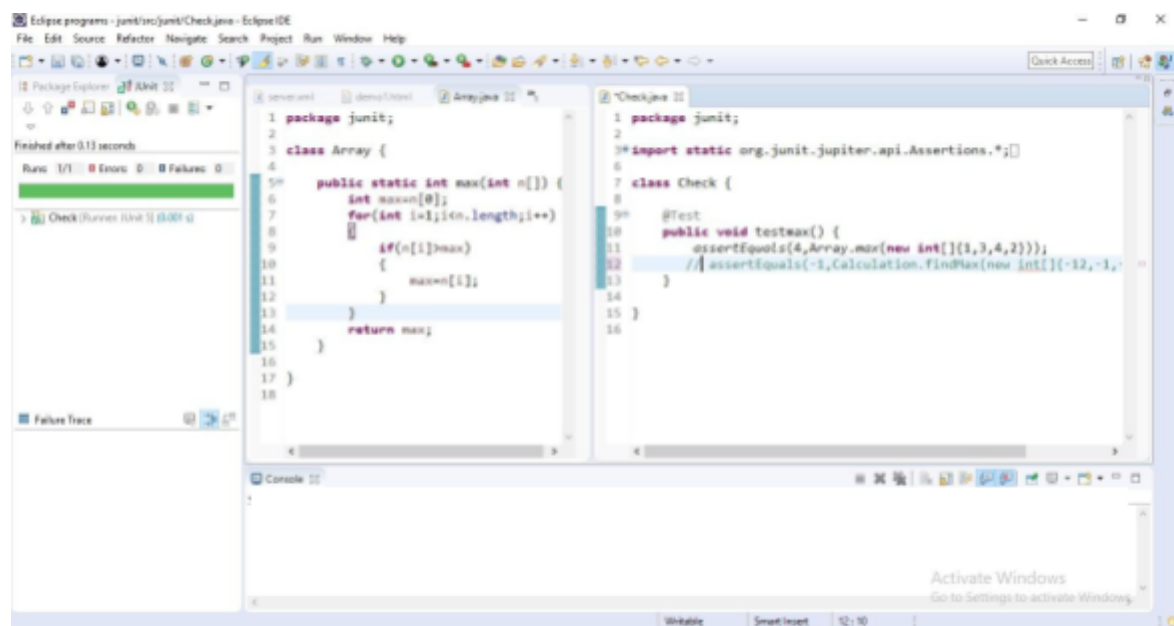**FAILS:**

Largest number:

```
Package junit;
Class Array{
Public static int max(int n[])
{
int max=n[0];
for(int i=1;i<n.length;i++)
{
if(n[i]>max)
{
max=n[i];
}
}
 return max;
}
```
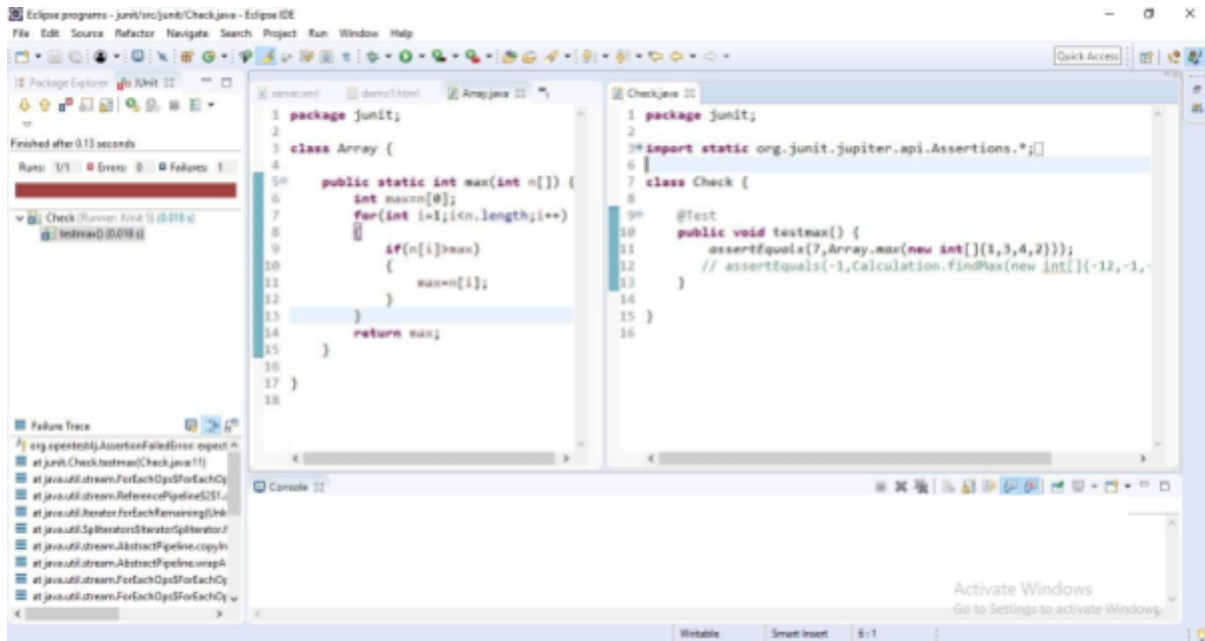
TEST CASE PROGRAM:

```
Package junit;
import static org,junit.Assertions.*;
public class check{
public void testmax()
{
assertEquals(4,Array.max(new int[] {1,3,4,2}));
}
}
```

RUNS:

FAILS:

RESULT:

      Continuous integration using a automated tool such as Jenkins were executed and tested successfully.