



# Classync - Virtual Classroom Platform

Black-Box Testing Report

Group - 33

**Course:** Software Engineering

**Professor:** Prof. Saurabh Tiwari

**Mentor:** Shyam Patel

## Team Members:

Role	Name (ID)
Team Leader	ATIK VOHRA - 202301447
Member	KANANI TANUJ - 202301474
Member	SANAGADHIYA RADHIKA - 202301184
Member	PATEL JAY - 202301430
Member	CHOVATIYA AYUSH - 202301461
Member	OM PATEL - 202301163
Member	BADRESIYA ANSH - 202301477
Member	PREM KUKADIYA - 202301452
Member	RAMOLIYA SHUBHAM - 202301442
Member	GAJERA MANTHON - 202301488

## Create Your Account (page)

### **Equivalence Class Partitioning :**

1) Valid Email Format Class:

- > Already created account email
- > New email entered

2) Blank/Unfill Input Class :

- > No Input Provided

3) Invalid Email Format Class :

- > Missing characters and improper order

<b>Equivalence Class</b>	<b>Type</b>	<b>Test case</b>	<b>Expected Outcome</b>	<b>Actual outcome</b>
Valid Email Format	Valid	User6122005@gmail.com	Accept and move	Accept
Empty Email	Invalid	“ ”	blank	Please fill out the form
Invalid Email(missing @)	Invalid	Usergmail.com	Error	Please Include @ in email provided
Valid email (already exists)	Valid	User@dau.ac.in	Error	Already Email registered

## Complete Registration

### **Equivalence Class Partitioning :**

#### 1) Password

- > Input value less than 6 values
- > Input value above than 6 values
- > Input value only Alphabet or only Number
- > Input value contains alphabet and numbers

#### 2) Confirm Password

- > Input same as password field
- > Input Different as password field

#### 3)Role selection

- > Student login
- > Instructor Login

<b>Password</b>	<b>Confirm Password</b>	<b>Role</b>	<b>Expected Outcome</b>	<b>Actual Outcome</b>
abcc	abcc	student	Password too short	Password too weak must be atleast 6 values
Useruser	user	student	Passwords not matched	Password do not match try again
Useruser	Useruser	instructor	Password too weak use numericals	Password too weak must have numericals and alphabet
User612	User612	student	Succesfull	Successful (Student dashboard)
qwerty123	qwerty123	Instructor	Succesfull	Successfull (Enter Instructor code )

## **Boundary Value Analysis :**

1) Password :

- > Password is empty
- > Password is not Empty

2) Confirm Password :

- > Confirm password is empty
- > Confirm password is not Empty

<b>Password</b>	<b>Confirm Password</b>	<b>Expected Outcome</b>	<b>Actual Outcome</b>	<b>Reason</b>
User123		Invalid	Invalid	Confirm password field empty
	User123	Invalid	Invalid	Password field empty
qwerty123	qwerty123	valid	valid	Logged in

## Create New Course

### **Equivalence Class Partitioning :**

1. Course Name :

- > Non-Empty string
- > Empty string

2. Description :

- > Non - empty string
- > Empty string

3. Subject :

- > Non-empty string

Course Name	Description	Subject	Expected Output	Actual Output	Create Button	Reason
Intro to AI	Basic concepts of AI	Computer Science	Valid	Valid	Enabled	All fields are Valid
	Basic concepts of AI	Computer Science	Invalid	Invalid	Disabled	Course Name is empty
Intro to AI		Computer Science	Invalid	Invalid	Disabled	Description is empty
Intro to AI	Basic concepts of AI		Invalid	Invalid	Disabled	Subject is empty

### **Boundary Value Analysis :**

1. Course Name

- > Empty String As Input
- > Single Character (Min length)

## **2. Description**

-> Empty String as Input

-> Single Character (Min length)

## **3. Subject**

-> Empty String as Input

-> Single Character (Min Length)

Course Name	Description	Subject	Expected Output	Actual Output	Create Button	Reason
A	B	C	Valid	Valid	Enabled	All fields have minimum valid length
	B	C	Invalid	Invalid	Disabled	Course Name is empty
A		C	Invalid	Invalid	Disabled	Description is empty
A	B		Invalid	Invalid	Disabled	Subject is empty

## Create Assignment

### **Equivalence Class Partitioning :**

#### **1. Course Selection**

- > Course Selected
- > No Course Selected

#### **2. Assignment Title**

- > Non-empty string
- > Empty string

#### **3. Description**

- > Non-empty string
- > Empty string

#### **4. Deadline**

- > Future Date/Time
- > Past Date/Time (Logically invalid, though system might allow)
- > Empty

#### **5. Max Score (Optional)**

- > Positive Number
- > Negative Number
- > Non-numeric

#### **6. File (Optional)**

- > Supported Format (.pdf , .doc , .docx , .txt .zip
- > Unsupported Format (e.g., .exe, .bat)

Course	Title	Description	Deadline	Max Score	File	Expected Output	Actual Output	Create Button	Reason
SE-101	Lab 1	Complete the lab	2025-12-31	100	lab.pdf	Valid	Valid	Enabled	All fields are Valid
	Lab 1	Complete the lab	2025-12-31	100	-	Invalid	Invalid	Disabled	Course not selected
SE-101		Complete the lab	2025-12-31	100	-	Invalid	Invalid	Disabled	Title is empty
SE-101	Lab 1		2025-12-31	100	-	Invalid	Invalid	Disabled	Description is empty
SE-101	Lab 1	Complete the lab		100	-	Invalid	Invalid	Disabled	Deadline is empty
SE-101	Lab 1	Complete the lab	2025-12-31	-50	-	Invalid	Invalid	Disabled	Max Score is negative
SE-101	Lab 1	Complete the lab	2025-12-31	100	game.exe	Invalid	Invalid	Disabled	File type not supported

## Boundary Value Analysis :

### 1. Assignment Title

-> Empty String as Input

-> Non-empty (1 char)

### 2. Max Score

->0 (Min valid)

-> -1 (Just below min) - Invalid as score must be positive

->1 (Just above min)

### 3. Deadline

->Current Time (Immediate)

## AI -BUBBLE

### **Equivalence Class Partitioning :**

#### 1) Chat Bar :

- > Input Questions based on General Conversations
- > Input Questions which are non educational oriented
- > Input Questions Mathematical Expressions
- > Input Questions which are educational oriented
- > Input as Meaningless String

### **Boundary Value Analysis:**

#### 1) Chat Bar :

- > Empty String as input
- > Non Empty string

<b>Input Message</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Send Button</b>	<b>Reason</b>
aaaaaa	Not a valid message	Unable to answer	Enabled	Meaningless string
Who is president of India	Valid Answer	Valid Answer	Enabled	Educational oriented question
Who is trending celeb in 2025	Not an Educational question	Not an Educational question	Enabled	It is not educational oriented question
	Invalid		Disabled	No input string
5 mod 2	1	1	Enabled	Mathematical Equation

Hi what's Your Name	Not a Valid Message	Not able to answer such Questions	Enabled	General conversations
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## AI-Doubt Solver

### Ask a Tutor

#### **Equivalence Class Partitioning :**

##### 1) Topic / Subject Bar:

- > Valid Subject or Topic name as input
- > Random Input value(eg - random string )
- > Non educational Topics

##### 2) Question Bar :

- > Valid Question statements Educational oriented
- > Random String as Input
- > Non Educational Question

## **Boundary Value Analysis :**

1) Topic /Subject Bar :

-> Empty string as Input

-> Non Empty string as Input

2) Question Bar :

-> Empty string as Input

-> Non Empty string as Input

<b>Topic Bar</b>	<b>Question Bar</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Reason</b>
Machine learning	What is supervised and unsupervised learning	Valid Answer	Valid Answer	Both Input are accurate in their terms
Movies	What is partitioning in data organization	No Response	Answer to provided question giving warning of false/unrelated topic	Question asked is educational so it is answered but has no match to topic
Cricket	ICC world Champions 2025?	No Response	No Response	Non educational Question
“ “	What is supervised learning	No Response	No Response	Topic field is empty
Machine Learning	“ “	No Response	No Response	Topic field is empty
aaaaaa	afdfefafef	No Response	No Response	No meaningful question asked

## AI-Summary Generator

### **Equivalence Class Partitioning :**

#### 1) Uploaded File :

- > File type is - Docx ,Txt
- > File type is of formats other than mentioned

#### 2) Grade / Branch :

- > Valid branch name or grades from 1-12
- > Non valid Names or strings

#### 3) Summary Type :

- > Selection from given options Quick,Detailed Summaries
- > Examples & Practice Questions

### **Boundary Value Analysis :**

#### 1) Uploaded File :

- > No Selected File
- > Selecting a file

#### 2) Branch/Grade :

- > Empty string as input
- > Non empty string as Input

File Uploaded	Branch / Grade	Summary type	Expected Outcome	Actual Outcome	Reason
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abc.txt	Computer science	Quick	Valid Summary	Valid Summary	All conditions are satisfied
abc.exe	Computer science	Quick	Not valid Filetype	Not valid Filetype	File format not supportive
	Computer Science	Quick	Error	File not Selected	File is not selected
abc.docx	aaaaaaaa	Quick	Invalid	Summary Generated with response to provide valid input	Branch is an non meaningful input
abc.docx	Computer science	Examples	Valid Output	Valid Examples for that topic	User selected examples as summary type

## Assignment Submission

### **Equivalence Class Partitioning :**

1) Uploaded File:

-> File type is - Docx ,Txt PDF , ZIP, Images, code files

-> File type is of formats other than mentioned

2) Deadline Filter :

-> Select date from Given Calender

-> No Date Selected (default)

3) Course :

-> Select Course User Enrolled in

-> No Selection (Default - ALL course)

**Boundary Value Analysis :**

1) Upload File :

-> No Selected File

-> Selecting a file

File	Submit Button	Expected Output	Actual Output	Reason
abc.pdf	Enabled	Submitted	Submitted	No condition unmatched
	Disabled	No output	No output	File not selected
abc.exe	Enabled	Not Submitted	Not Submitted	File type not mentioned by Instructor

# Acceptance Testing

## 1. Create Account Page

Email : [202301430@dau.ac.in](mailto:202301430@dau.ac.in)

Password : jay

Confirm Pass : jay

Output : Valid

### Complete Registration

Email verified successfully! Now complete your registration.

Email (Verified)  
202301430@dau.ac.in

Password  
jay

Confirm Password  
...

Role  
Student

**Sign up**

[Use Different Email](#)

[Already have an account? Login](#)

[Back to Home](#)

Email : [202301430@dau.ac.in](mailto:202301430@dau.ac.in)

Password : jay

Confirm Pass : jay    Output : Invalid

## Complete Registration

Password is too weak. Please use at least 6 characters with a mix of letters and numbers.

Email (Verified)  
202301430@dau.ac.in

Password  
...

Confirm Password  
...

Role  
Student

**Sign up**

[Use Different Email](#)  
[Already have an account? Login](#)  
[Back to Home](#)

Email : [202301430@dau.ac.in](mailto:202301430@dau.ac.in)

Password : jay6121222

Confirm Pass : jay

Output : InValid

## Complete Registration

Passwords do not match. Please try again.

Email (Verified)  
202301430@dau.ac.in

Password  
.....

Confirm Password  
...

Role  
Student

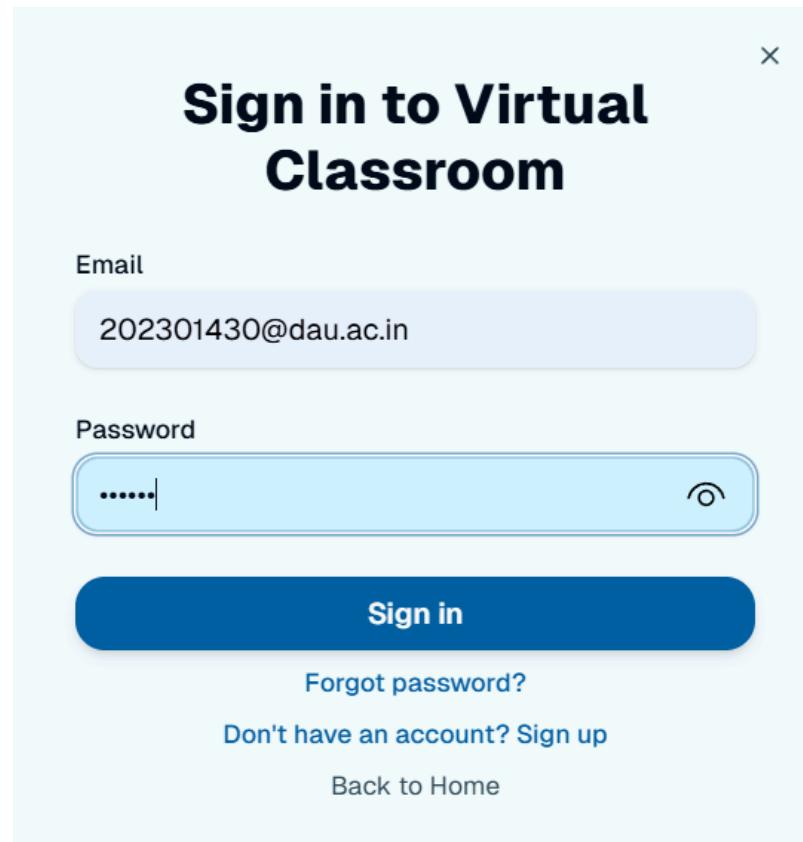
**Sign up**

[Use Different Email](#)  
[Already have an account? Login](#)  
[Back to Home](#)

## 2) Login Page :

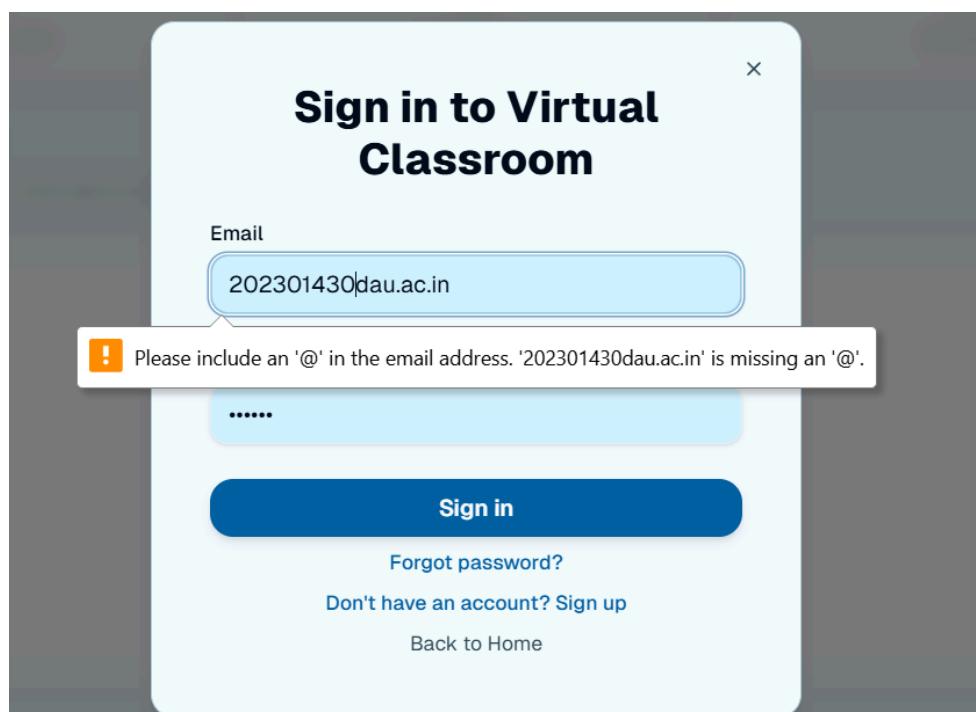
Email: [202301430@dau.ac.in](mailto:202301430@dau.ac.in)

Pass : jay612



Email : [20231430dau.ac.in](mailto:20231430dau.ac.in) (@ missing)

Pass: jay612



### 3) Forget Password :

Reset your password for project-236710046166 External Inbox x

 classync2025@gmail.com  
to me ▾

8:45 PM (0 minutes ago) 9

Hello,

Follow this link to reset your project-236710046166 password for your [202301430@dau.ac.in](mailto:202301430@dau.ac.in) account.

[https://vir-class-plat.firebaseio.com/\\_auth/action?mode=resetPassword&oobCode=C100enlZrJYQI\\_zU-6Zxgz4bKewavYyxej6q7\\_oOwFMAAAgAtm99mQ&apiKey=AlzaSyBBGSLp9zVJP027eUZRamAB1NDW7PY2MPo&lang=en](https://vir-class-plat.firebaseio.com/_auth/action?mode=resetPassword&oobCode=C100enlZrJYQI_zU-6Zxgz4bKewavYyxej6q7_oOwFMAAAgAtm99mQ&apiKey=AlzaSyBBGSLp9zVJP027eUZRamAB1NDW7PY2MPo&lang=en)

If you didn't ask to reset your password, you can ignore this email.

Thanks,

Your project-236710046166 team

### After Successfull Login to Student profile :

#### Student Dashboard :

 Classsync 9 2

Assignments My Progress AI Tools

**My Course** + Join Course

Manage your class and track progress

**Software Engineering**  
Great Course for the development part

Prof. Atik Vohra 7 Students

Your Progress 0/1  
1 left 0%

Computer Science VOSOC9

➡ Unenroll

**Nanotechnology**  
Great for future scope

Prof. Atik Vohra 5 Students

Your Progress 0/1  
1 left 0%

Physics VONAGF

➡ Unenroll

**Digital Communication**  
SSSS

Prof. Atik Vohra 3 Students

Your Progress 0/0  
No assignments posted yet.

Chemistry VODINT

➡ Unenroll

\*

## After Successfull login to Instructor Dashboard :

The screenshot shows the Classsync Instructor Dashboard. At the top, there are three navigation tabs: 'Admin Dashboard', 'View Analytics', and 'AI Tools'. Below the tabs, a section titled 'My Course' displays a course named 'Computer Network'. The course description is 'A course on Networks and protocols used in routing'. It is taught by 'Prof. Jay Patel 6122005' and has '1 Students'. There are buttons for 'Other' and 'JACOFO'. On the right side of the dashboard, there is a blue circular button with a white star icon.

### 4) Create Course :

Course Name : IOT

Description : Welcome.....

Subject : Computer Science

Output : Valid

The modal window is titled 'Create New Course' and has a subtitle 'Set up a new classroom for your students'. It contains fields for 'Course Title' (filled with 'Internet Of Things'), 'Description' (filled with 'welcome to a course where you can work on real projects'), and 'Subject' (set to 'Computer Science'). At the bottom, there are 'Cancel' and 'Create Course' buttons.

**Create New Course**

Set up a new classroom for your students

Course Title

Internet Of Things

Description

welcome to a course where you can work on real projects

Subject

Computer Science

Cancel Create Course

## 5) Create Assignment :

Course : Computer Network

Title : Lab 2

Description -Submit code files

Deadline : 11/28/2025

**Create New Assignment**

Add a new assignment for students

Computer Network (JACOFO) ▾

**Audience**  
● Whole Class

**Assignment Title \***  
Lab 2

**Description \***  
Submit code files

**Deadline \***  
11/28/2025 09:12 PM

**Max Score (Optional)**  
100|

**Assignment File (Optional)**  
Choose File No file chosen

**Create Assignment**

## Group Specific Assignments

**Create New Assignment**

Add a new assignment for students

**Course/Subject \***  
Approaches to Indian Society (ANAPC4) ▾

**Audience**  
 Whole Class  Specific Group(s)

**Select Group(s)**  
1 group(s) selected

**Assignment Title \***  
Lab5

**Description \***  
only for G1

**Deadline \***  
12/04/2025 09:20 PM

**Max Score (Optional)**

## 6) Assignment Submission :

File Submitted

**Lab1** Active

Basic

Computer Network Due: December 10th, 2025 12:54 PM

Upload your submission \*

Selected: 202301482\_&\_202301430\_IE494\_Term\_Paper.docx  
Accepted formats: PDF, DOC, TXT, ZIP, Images, Code files

## 7) Join Classroom :

Code : anapc4

Code : ANAPC4

(both written code are valid here)

**Join a New Course** ×

Enter the 6-digit course code from your instructor.

Course Code

anapc4

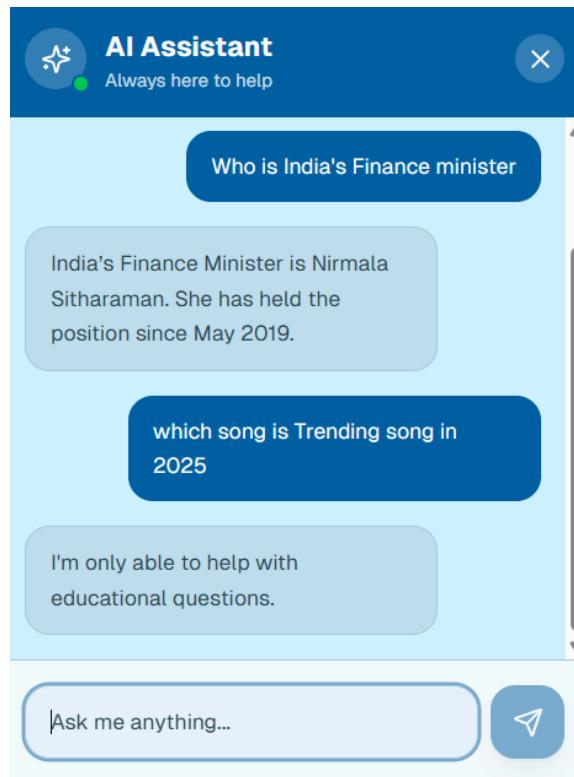
## 8) Ai Bubble :

Input : Educational conversations

Output :Valid response

Input : Non Educational Conversation

Output : No Response



## 9) AI Summary Generator :

Input : File not Uploaded

Output: Please Upload a file

A screenshot of the AI Summary Generator web interface. It starts with a "Upload your file" section, which includes a "Choose File" button and a message "No file chosen". Below this is a "What's your grade or branch?" section with a dropdown menu set to "Data Science". The next section is "How do you want your summary?", with a dropdown menu currently showing "Quick overview (5 min read)". At the bottom is a large blue "Generate Summary" button. A prominent red warning banner at the very bottom states "Please upload a file before submitting.".

**Input : File Uploaded**

**Output : Successful Summary Generated**

The screenshot shows a user interface for generating a summary. At the top, there is a file upload section with a 'Choose File' button and a selected file path: '202301482\_&\_202301430\_IE494\_Term\_Paper.docx'. Below this, a message says 'Selected: 202301482\_&\_202301430\_IE494\_Term\_Paper.docx'. A question 'What's your grade or branch?' is followed by a dropdown menu with 'Data Science' selected. Another question 'How do you want your summary?' has a dropdown menu showing 'Quick overview (5 min read)'. A large blue button at the bottom right is labeled 'Generate Summary' with a star icon. Below the main form, a section titled 'Your summary' displays the generated content:

### Brief Summary of Study Report on PBSTs in Spark-SQL

The study report examines how to enhance query performance in distributed data warehouses, especially when using Spark-SQL. It introduces a method called PBSTs (Partition, Bucket, and Sort the Tables) to optimize data layout. The approach utilizes frequent itemset mining to identify commonly used attributes in queries, which helps in deciding how to partition and organize data effectively. The authors claim that their method can improve query response times by up to 50% compared to traditional partitioning techniques.

### Key Points

- \*\*Motivation\*\*: Large data scans in distributed systems like HDFS slow down query processing. Efficient data layout is crucial for fast insights.

## **10) AI-Doubt Solver :**

**Input : Subject not mentioned**

**Output : Give both input values**

The screenshot shows a 'Ask a Question' interface. At the top, there is a lightbulb icon and the text 'Ask a Question'. Below this is a text input field with the placeholder 'Enter topic (e.g., Physics, Math, History)'. The user has typed 'what is supervised learning' into this field. At the bottom, a large blue button is labeled 'Get Answer' with a right-pointing arrow icon. A red error message at the very bottom reads 'Please enter both topic and question'.

**Input :** Both Input Values are given

**Output:** Valid answer to provided Question

 **Ask a Question**

Machine Learning

what is supervised learning

 Get Answer

 **Answer** 

**Introduction**  
Machine learning is a subset of artificial intelligence that involves the use of algorithms and statistical models to enable machines to perform a specific task without using explicit instructions. One of the key categories of machine learning is supervised learning, which is a fundamental concept in the field. In this explanation, we will delve into the world of supervised learning, exploring its definition, how it works, and providing examples to illustrate its application.

**Main Explanation**  
Supervised learning is a type of machine learning where the algorithm is trained on labeled data. This means that the data used for training is already tagged with the correct output, allowing the algorithm to learn from the examples and make predictions on new, unseen data. The primary goal of supervised learning is to map inputs to outputs based on the labeled data, enabling the model to generalize and make accurate predictions. The process involves several steps, including data collection, data preprocessing, model selection, training, and evaluation. Common supervised learning algorithms include linear regression, logistic regression, decision trees, random forests, and support vector machines.

**Example(s)**  
A classic example of supervised learning is image classification. Imagine you want to train a model to distinguish