Saiket Systems Internship tasks

Task1

Task 1: Calculator Application

Description:

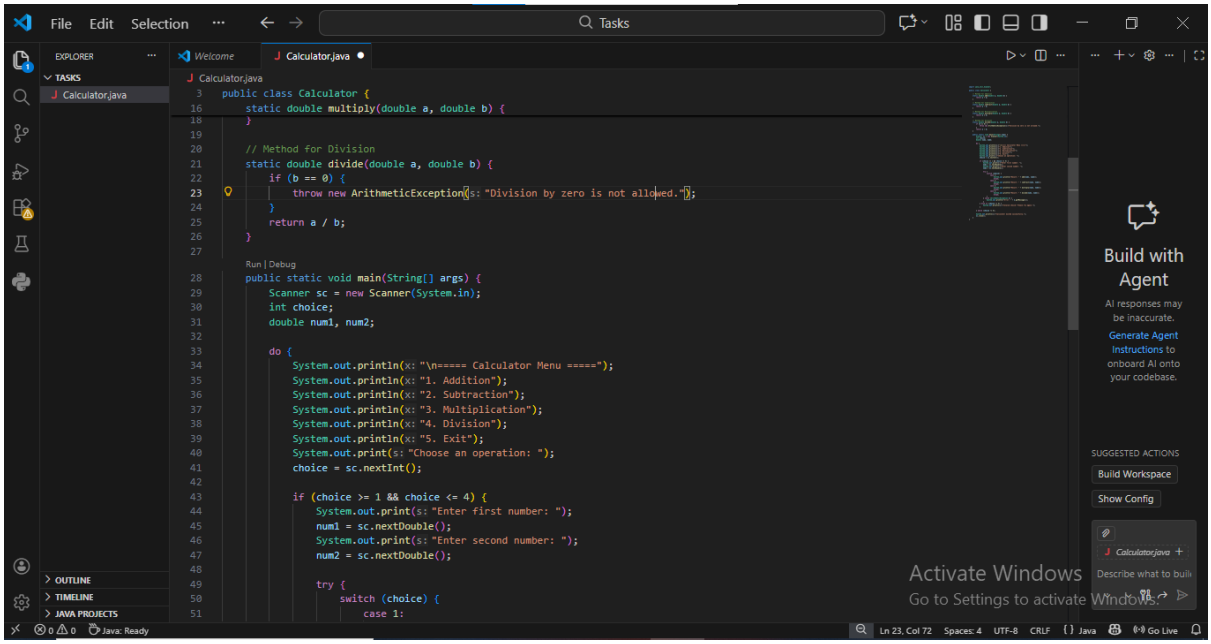
Build a basic calculator application enabling arithmetic operations. Create a user-friendly menu for selecting operations, input numbers, and handle edge cases, such as division by zero, using exception handling. Strengthen your understanding of core Java concepts like methods and conditionals through this task.

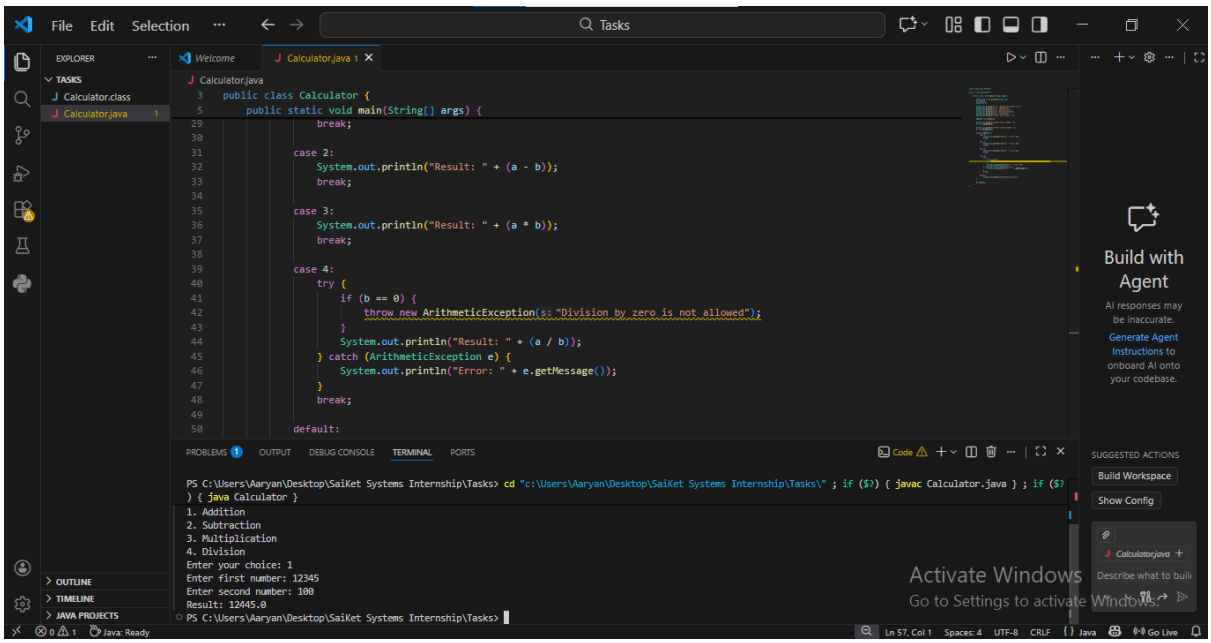
Skills:

Core Java Concepts (Methods, Conditionals)

User Input Handling

Exception Handling


File Edit Selection
Tasks
EXPLORER
TASKS
Calculator.java
Welcome
Calculator.java
public class Calculator {
static double multiply(double a, double b) {
}
// Method for Division
static double divide(double a, double b) {
if (b == 0) {
throw new ArithmeticException("Division by zero is not allowed.");
}
return a / b;
}
Run | Debug
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
int choice;
double num1, num2;
do {
System.out.println("\n===== Calculator Menu =====");
System.out.println("1. Addition");
System.out.println("2. Subtraction");
System.out.println("3. Multiplication");
System.out.println("4. Division");
System.out.println("5. Exit");
System.out.print("Choose an operation: ");
choice = sc.nextInt();
if (choice >= 1 && choice <= 4) {
System.out.print("Enter first number: ");
num1 = sc.nextDouble();
System.out.print("Enter second number: ");
num2 = sc.nextDouble();
try {
switch (choice) {
case 1:
OUTLINE
TIMELINE
JAVA PROJECTS
Java: Ready
Ln 23, Col 72 Spaces: 4 UTF-8 CRLF Java Go Live
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
SUGGESTED ACTIONS
Build Workspace
Show Config
Describe what to build
Activate Windows
Go to Settings to activate Windows.


File Edit Selection
Tasks
EXPLORER
TASKS
Calculator.class
Calculator.java
Welcome
Calculator.java 1
Calculator.java
public class Calculator {
public static void main(String[] args) {
break;
case 2:
System.out.println("Result: " + (a - b));
break;
case 3:
System.out.println("Result: " + (a * b));
break;
case 4:
try {
if (b == 0) {
throw new ArithmeticException("Division by zero is not allowed");
}
System.out.println("Result: " + (a / b));
} catch (ArithmeticException e) {
System.out.println("Error: " + e.getMessage());
}
break;
default:
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\Aaryan\Desktop\SaiKet Systems Internship\Tasks> cd "c:\Users\Aaryan\Desktop\SaiKet Systems Internship\Tasks\" ; if ($?) { javac Calculator.java } ; if ($?) { java Calculator }
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter your choice: 1
Enter first number: 12345
Enter second number: 100
Result: 12445.0
PS C:\Users\Aaryan\Desktop\SaiKet Systems Internship\Tasks>
OUTLINE
TIMELINE
JAVA PROJECTS
Java: Ready
Ln 57, Col 1 Spaces: 4 UTF-8 CRLF Java Go Live
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
SUGGESTED ACTIONS
Build Workspace
Show Config
Describe what to build
Activate Windows
Go to Settings to activate Windows.

Task 2: Temperature Converter

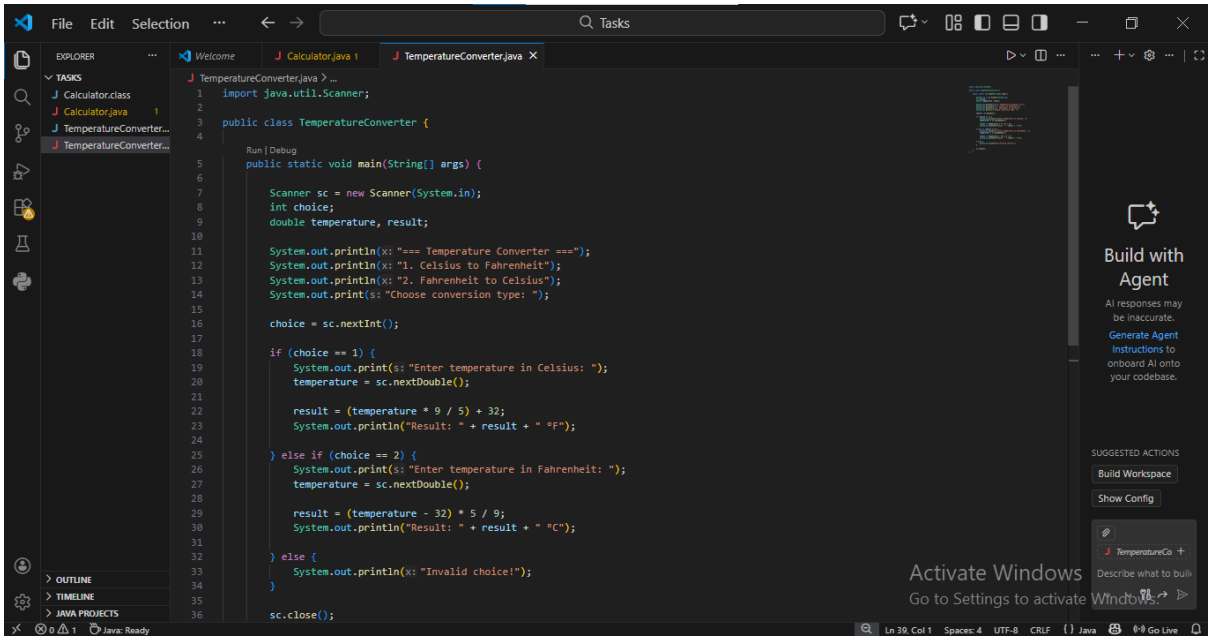
Description:

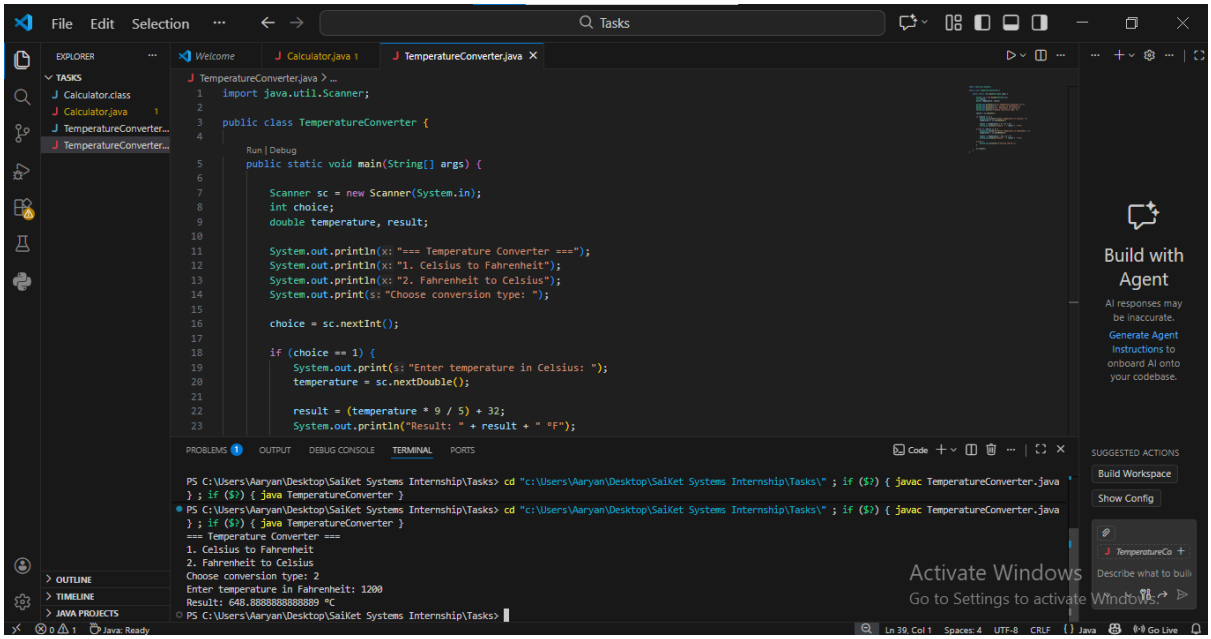
Create a temperature converter that handles Celsius to Fahrenheit and vice versa. Allow users to choose input and output scales. Implement conversion formulas and provide clear results. This task reinforces your Java programming skills and mathematical operation implementation.

Skills:

Core Java Concepts (Methods, User Input)

Mathematical Operations





Task3

Task 3: To-Do List Application

Description:

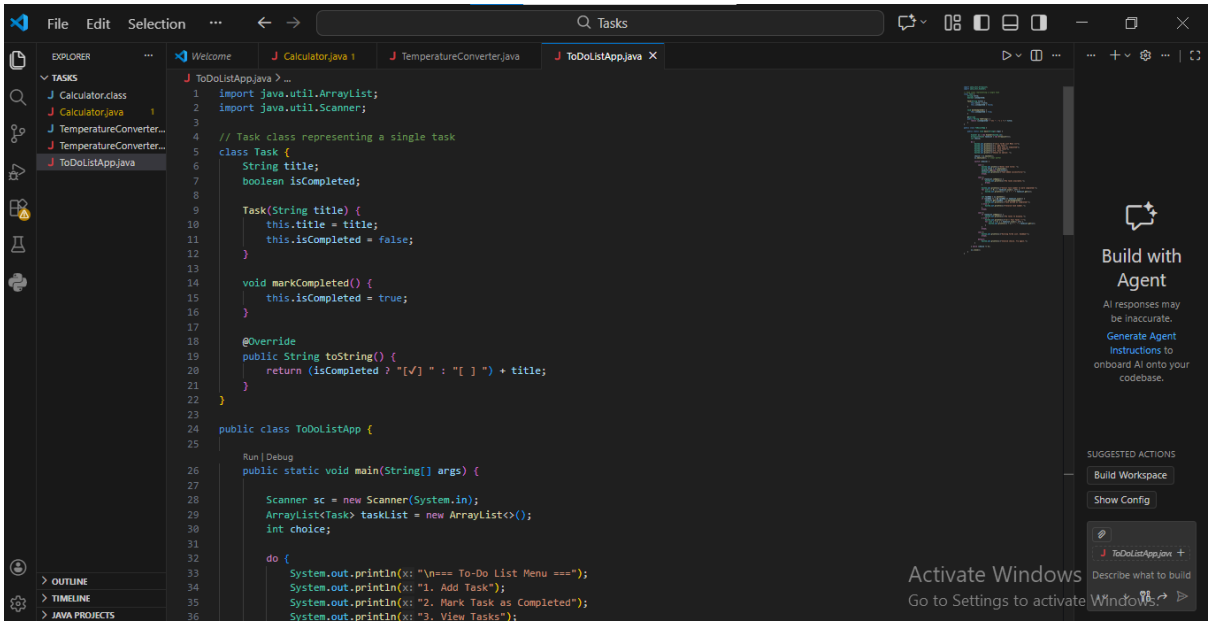
Develop a to-do list application where users can manage tasks. Use classes to represent tasks, incorporating attributes like title and status. Implement functions for adding tasks, marking them as complete, and displaying the task list. Enhance your knowledge of object-oriented programming and data structure manipulation.

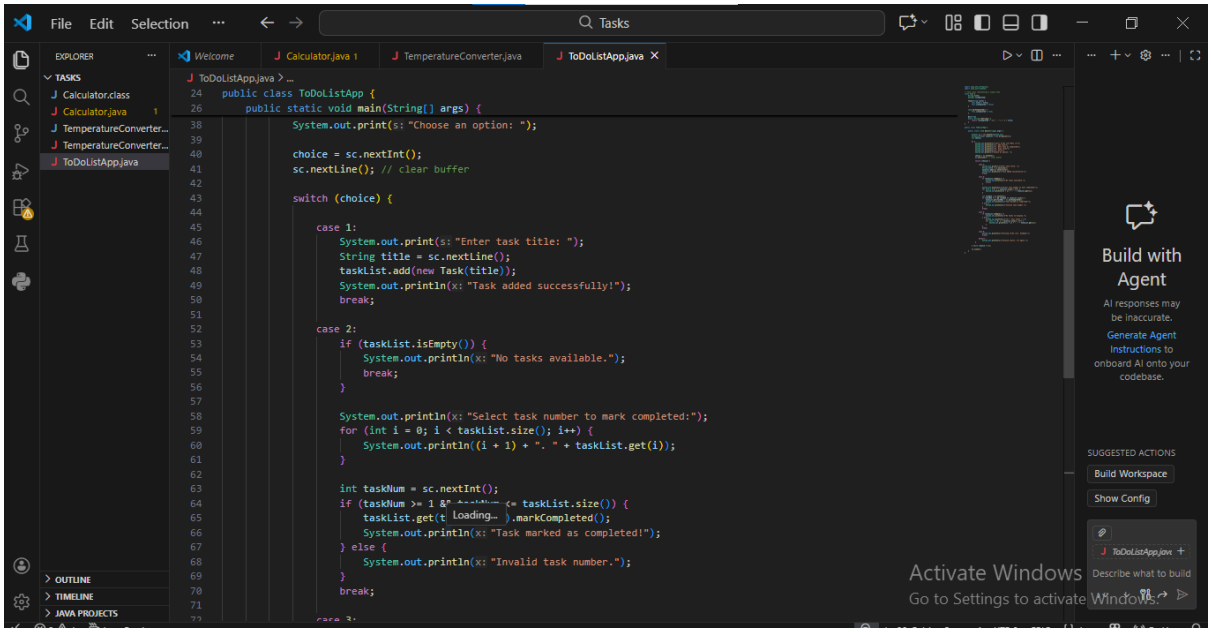
Skills :

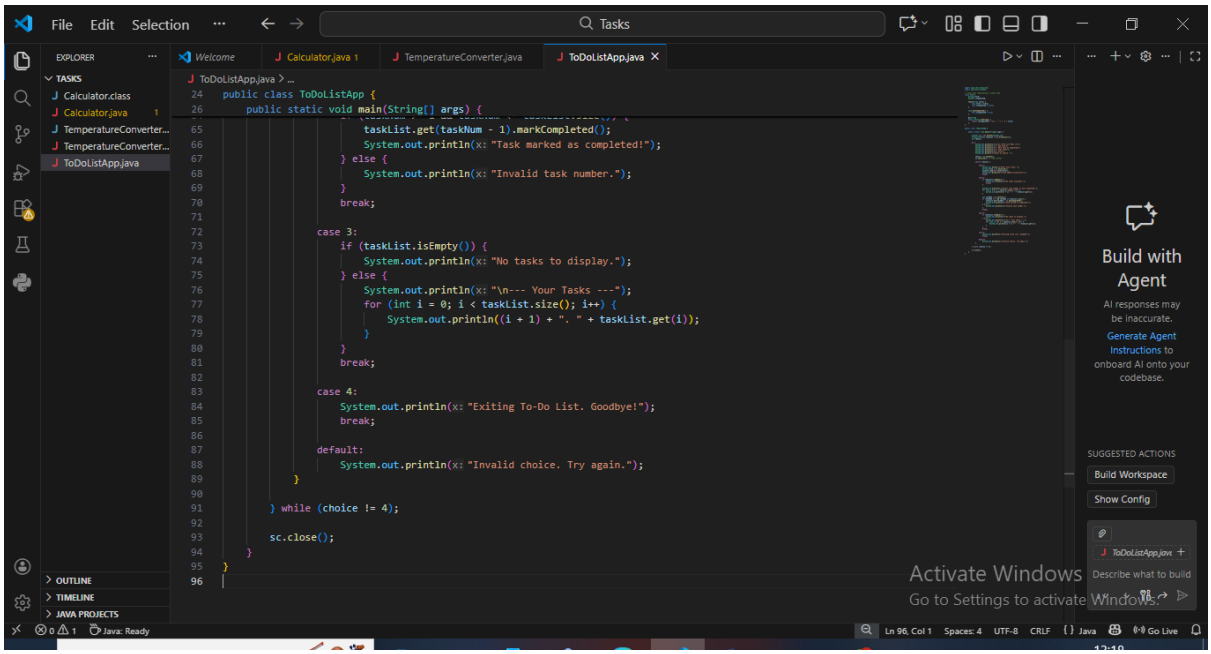
Object-Oriented Programming (Classes, Objects)

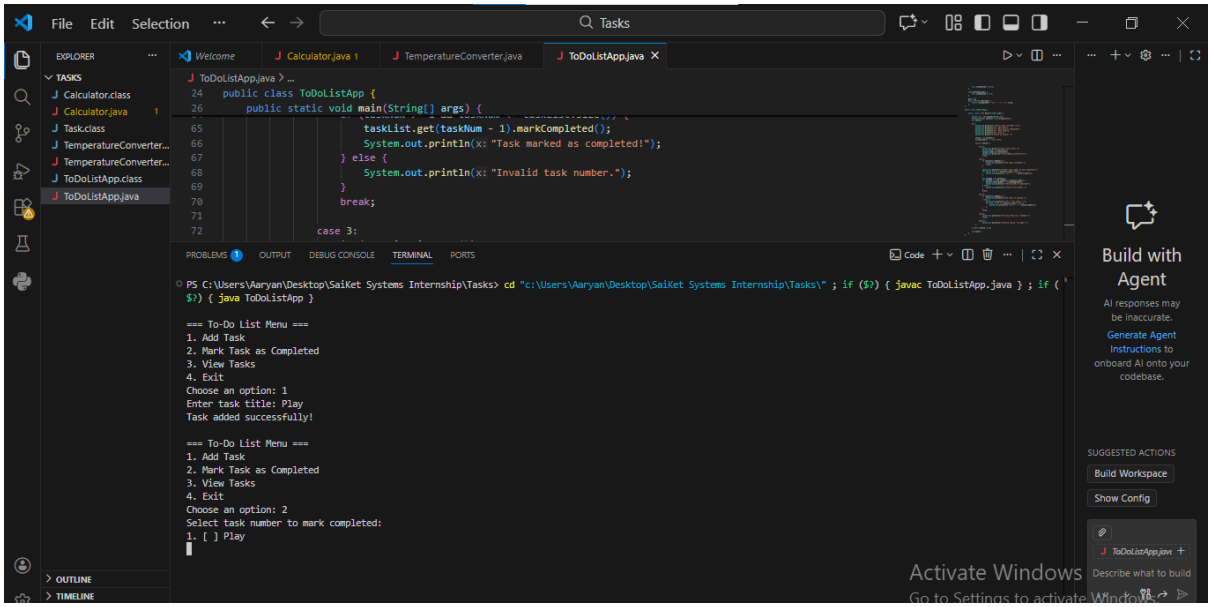
Data Structures (Lists)

Conditional Statements




File Edit Selection
Tasks
EXPLORER
TASKS
Calculator.class
Calculator.java
TemperatureConverter...
TemperatureConverter...
ToDoListApp.java
Welcome
Calculator.java 1
TemperatureConverter.java
ToDoListApp.java
ToDoListApp.java > ...
public class ToDoListApp {
public static void main(String[] args) {
System.out.print(s: "Choose an option: ");
choice = sc.nextInt();
sc.nextLine(); // clear buffer
switch (choice) {
case 1:
System.out.print(s: "Enter task title: ");
String title = sc.nextLine();
taskList.add(new Task(title));
System.out.println(x: "Task added successfully!");
break;
case 2:
if (taskList.isEmpty()) {
System.out.println(x: "No tasks available.");
break;
}
System.out.println(x: "Select task number to mark completed:");
for (int i = 0; i < taskList.size(); i++) {
System.out.println((i + 1) + ". " + taskList.get(i));
}
int taskNum = sc.nextInt();
if (taskNum >= 1 &&
<= taskList.size()) {
taskList.get(t
Loading...
).markCompleted();
System.out.println(x: "Task marked as completed!");
} else {
System.out.println(x: "Invalid task number.");
}
break;
case 3:
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
SUGGESTED ACTIONS
Build Workspace
Show Config
ToDoListApp.java
Describe what to build
OUTLINE
TIMELINE
JAVA PROJECTS
Activate Windows
Go to Settings to activate Windows.


File Edit Selection
Tasks
EXPLORER
TASKS
Calculator.class
Calculator.java
TemperatureConverter...
TemperatureConverter...
ToDoListApp.java
Welcome
Calculator.java 1
TemperatureConverter.java
ToDoListApp.java
ToDoListApp.java > ...
public class ToDoListApp {
public static void main(String[] args) {
taskList.get(taskNum - 1).markCompleted();
System.out.println(x: "Task marked as completed!");
} else {
System.out.println(x: "Invalid task number.");
}
break;
case 3:
if (taskList.isEmpty()) {
System.out.println(x: "No tasks to display.");
} else {
System.out.println(x: "\n--- Your Tasks ---");
for (int i = 0; i < taskList.size(); i++) {
System.out.println((i + 1) + ". " + taskList.get(i));
}
}
break;
case 4:
System.out.println(x: "Exiting To-Do List. Goodbye!");
break;
default:
System.out.println(x: "Invalid choice. Try again.");
}
} while (choice != 4);
sc.close();
}
}
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
SUGGESTED ACTIONS
Build Workspace
Show Config
ToDoListApp.java
Describe what to build
OUTLINE
TIMELINE
JAVA PROJECTS
Activate Windows
Go to Settings to activate Windows.
Java: Ready
Ln 96, Col 1
Spaces: 4
UTF-8
CRLF
Java
Go Live

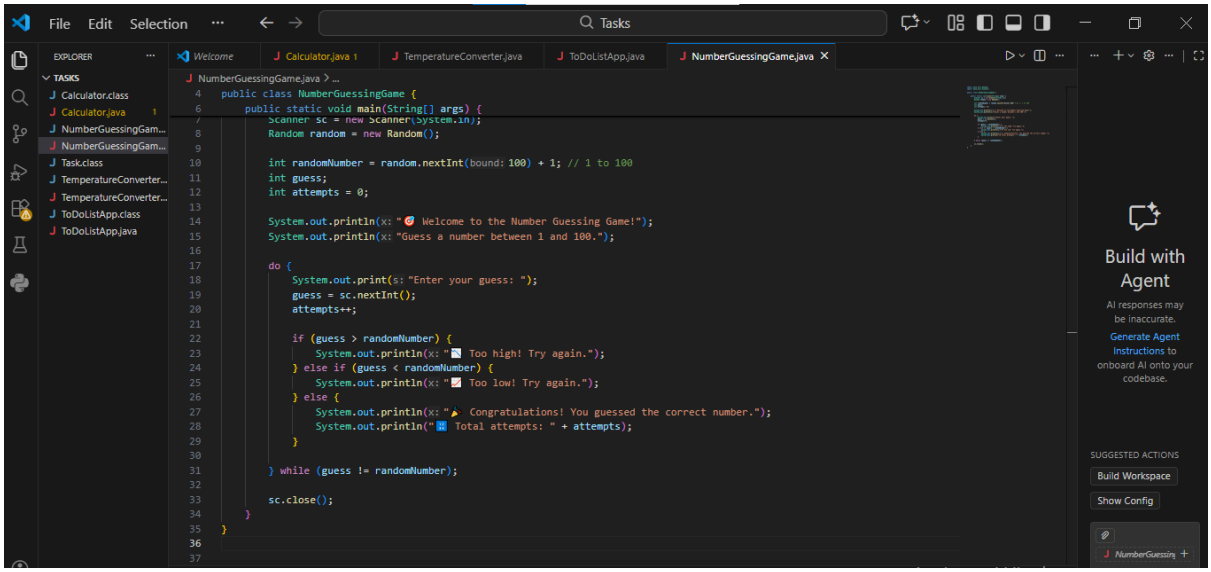


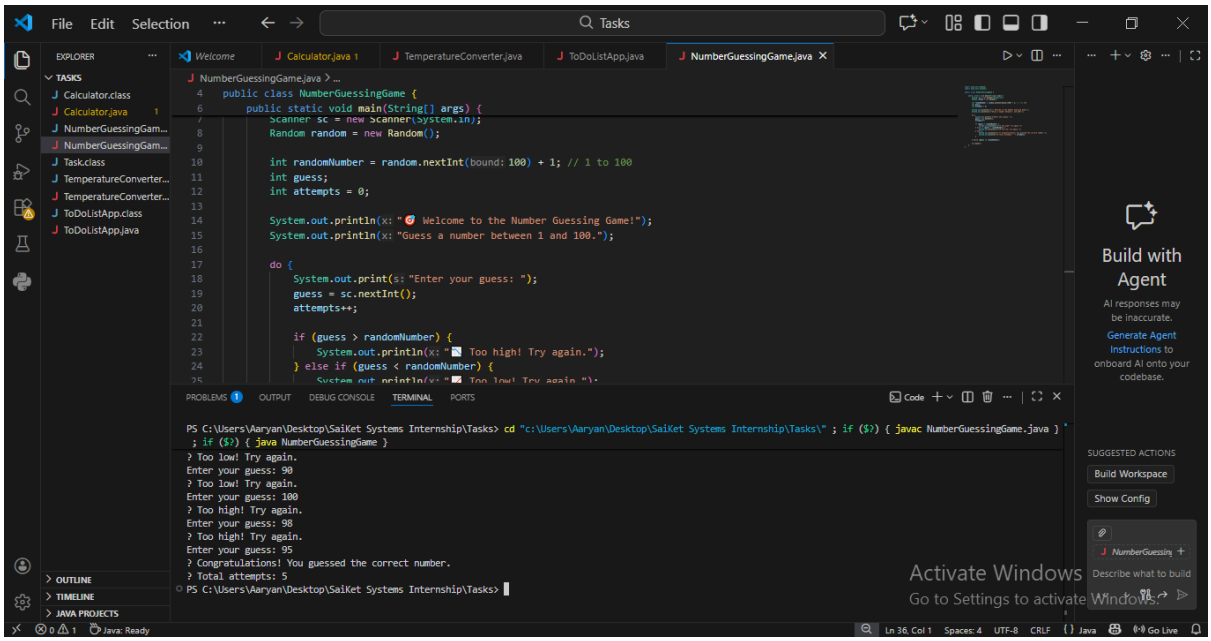
Task4

Task 4: Number Guessing Game Description: Create a number-guessing game where users guess a random number. Provide feedback for high or low guesses and track attempts. Implement loops for multiple attempts and reinforce your skills in handling random numbers and conditional statements.

Skills :

Core Java Concepts (Random Numbers, Loops) User Input Handling Conditional Statements





Task5

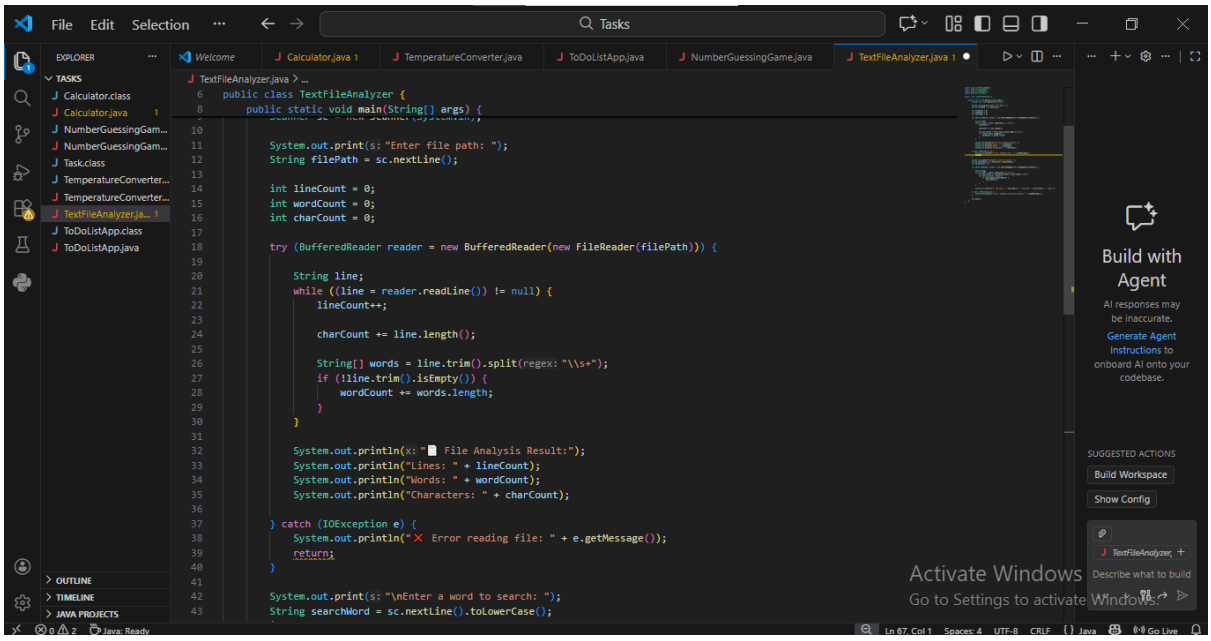
Task 5:

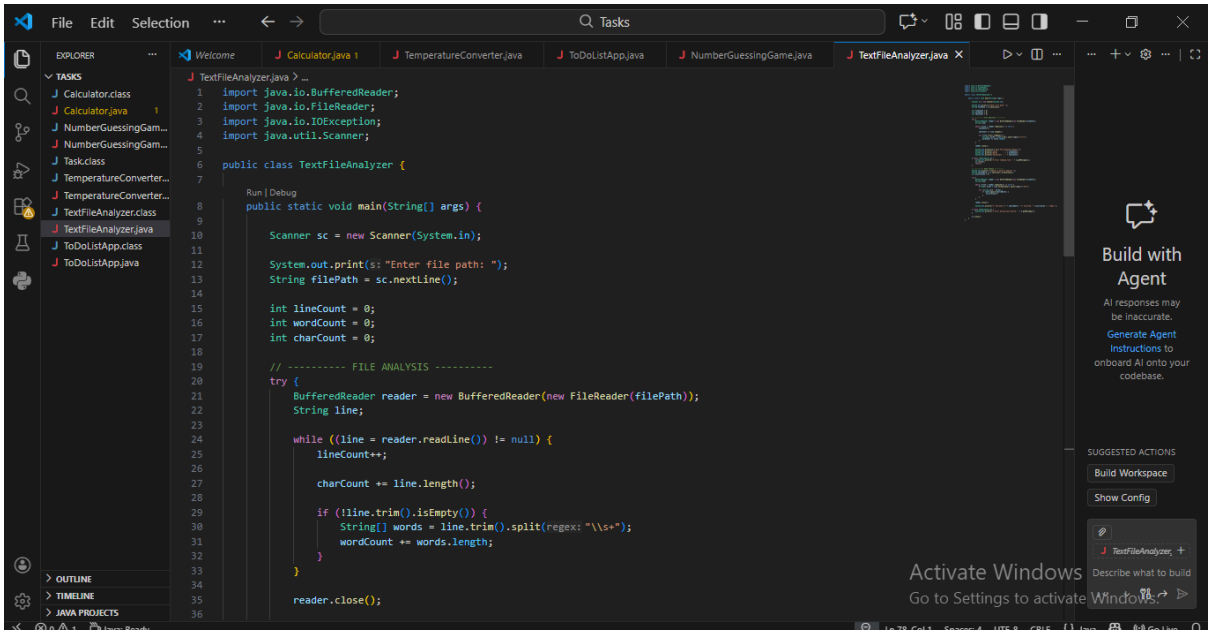
Text File Analyzer Write a program to analyze a text file, counting words, lines, and characters. Implement

functionality to search for specific words. Utilize file I/O, string manipulation, and exception handling. This task strengthens your file-handling skills and text-processing abilities in Java.

Skills :

File Input/Output in Java String Manipulation
Exception Handling





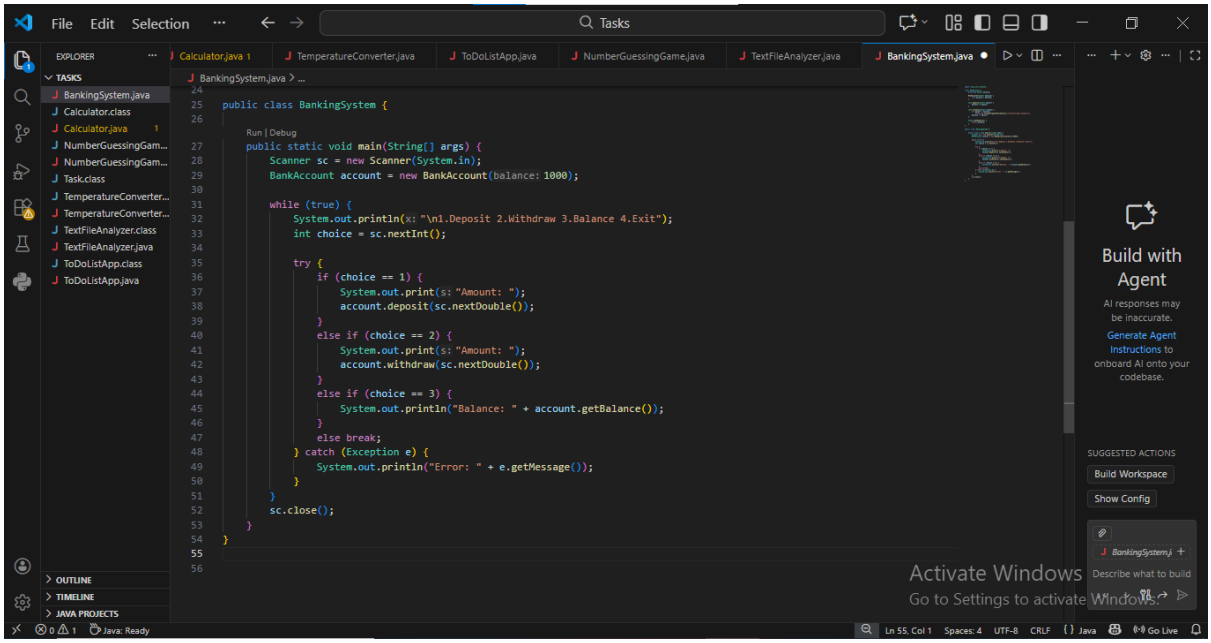
Task6

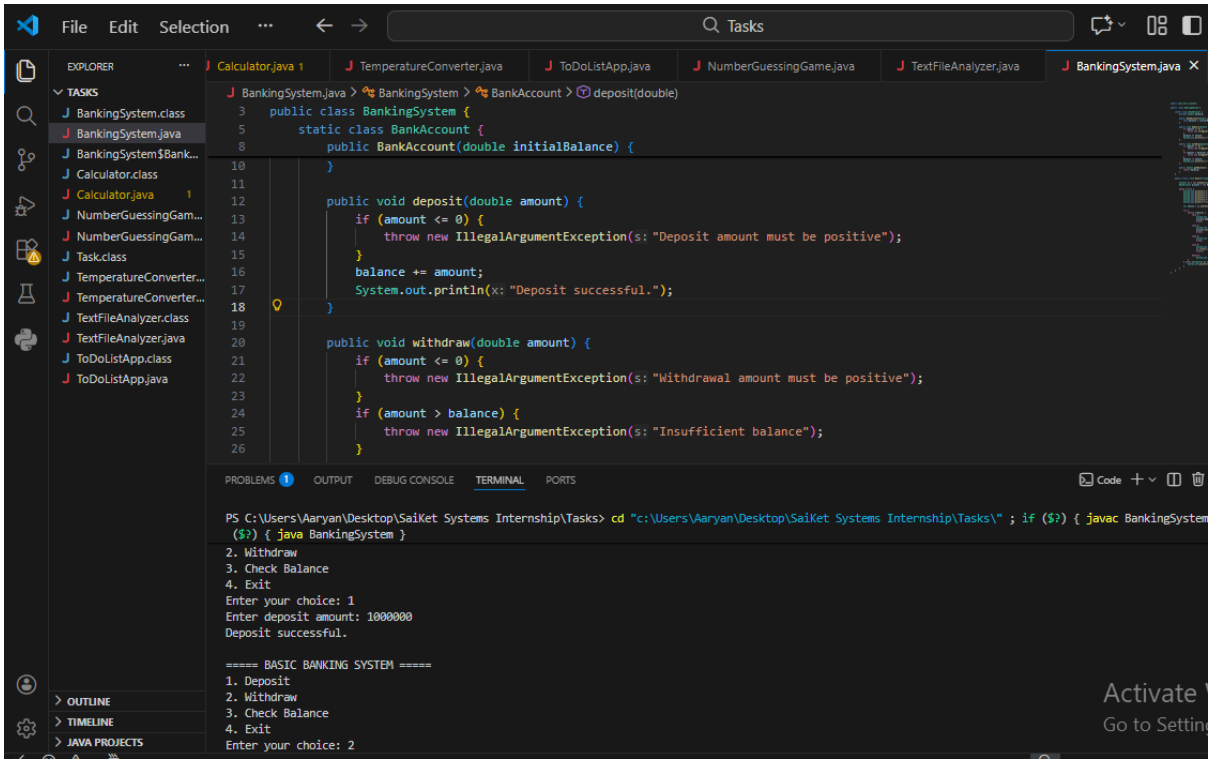
Task 6:

Basic Banking System Description: Develop a basic banking system where users can manage accounts, perform transactions, and view balances. Utilize classes for representing bank accounts and handle operations like deposit, withdrawal, and transaction history. This task enhances your understanding of classes, inheritance, and exception handling.

Skills: -

Object-Oriented Inheritance) User Input Handling Exception Handling Programming (Classes, Inheritance) User Input Handling Exception Handling




File Edit Selection
Tasks
EXPLORER
TASKS
BankingSystem.class
BankingSystem.java
BankingSystem$Bank...
Calculator.class
Calculator.java 1
NumberGuessingGam...
NumberGuessingGam...
Task.class
TemperatureConverter...
TemperatureConverter...
TextFileAnalyzer.class
TextFileAnalyzer.java
ToDoListApp.class
ToDoListApp.java
OUTLINE
TIMELINE
JAVA PROJECTS
Calculator.java 1
TemperatureConverter.java
ToDoListApp.java
NumberGuessingGame.java
TextFileAnalyzer.java
BankingSystem.java
BankingSystem.java > BankingSystem > BankAccount > deposit(double)
3 public class BankingSystem {
5 static class BankAccount {
8 public BankAccount(double initialBalance) {
10 }
11
12 public void deposit(double amount) {
13 if (amount <= 0) {
14 throw new IllegalArgumentException(s: "Deposit amount must be positive");
15 }
16 balance += amount;
17 System.out.println(x: "Deposit successful.");
18 }
19
20 public void withdraw(double amount) {
21 if (amount <= 0) {
22 throw new IllegalArgumentException(s: "Withdrawal amount must be positive");
23 }
24 if (amount > balance) {
25 throw new IllegalArgumentException(s: "Insufficient balance");
26 }
PROBLEMS 1
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Code
PS C:\Users\Aaryan\Desktop\SaiKet Systems Internship\Tasks> cd "c:\Users\Aaryan\Desktop\SaiKet Systems Internship\Tasks\" ; if ($?) { javac BankingSystem
($?) { java BankingSystem }
2. Withdraw
3. Check Balance
4. Exit
Enter your choice: 1
Enter deposit amount: 1000000
Deposit successful.
===== BASIC BANKING SYSTEM =====
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Enter your choice: 2
Activate
Go to Settin