```
Day-1
Task
else if condition using && operator
public class Main
public static void main(String[] args) {
int age=16;
if(age>16)
{
   System.out.println("valid");
else if(age<16)
{
 System.out.print("invalid");
}
else
 System.out.println("Age is 16");
Output:
Age is 16
public class Main
```

```
public static void main(String[] args) {
int age=19;
String gender="female";
if(age>=21 && gender=="female")
   System.out.println("Eligible for female");
else if(age>=23 && gender=="male")
 System.out.print("Eligible for male");
else
 System.out.println("Not eligible");
Output:
Not eligible
elseif condition using || operator
public class Main
```

```
public static void main(String[] args) {
int age=18;
String gender="female";
if(age>16 || gender=="female")
   System.out.println("Ticket is free");
}
else
{
 System.out.println("Ticket is not free");
}
Output:
Ticket is free
Using Switch Case:
public class Main
public static void main(String[] args) {
int age=18;
String gender="male";
if(age<18 || gender=="female")
```

```
System.out.println("Ticket is free");
}
else
 int km=15;
 switch(km){
   case:{
     System.out.println("Rupees 50");
     break;
   case 10:{
     System.out.println("Rupees 100");
     break;
   default:{
     System.out.println("Not Applicable");
}
Output:
Not Applicable
```

```
Using do while
public class Main
public static void main(String[] args) {
 int i=5;
 do
   System.out.println(i);
   i++;
 while(i<5);
}
Output:
5
Methods:
return type without static
public class Main
 int myMethod(int a,int b)
  {
    return a+b;
```

```
}
public static void main(String[] args) {
 Main m=new Main();
 System.out.print(m.myMethod(5,10));
Output:
15
with static
public class Main
{
  static int myMethod(int a,int b)
  {
    return a+b;
public static void main(String[] args) {
 System.out.print(myMethod(5,10));
Output
55
Day-2
```

```
Task
1)class Main {
  public static void main(String[] args) {
    String str = "morning";
    String vowels = "";
    String consonants = "";
    for (int i = 0; i < str.length(); i++) {
      char ch = str.charAt(i);
      if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {
         vowels += ch;
      } else {
         consonants += ch;
      }
    }
    System.out.println("Vowels: " + vowels);
    System.out.println("Consonants: " + consonants);
  }
output: Vowels: oi
Consonants: mrnng
```

```
2)public class Main {
  public static void main(String[] args) {
    int[] arr = {10, 20, 30, 40, 50};
    int n = arr.length;
    for (int i = n - 1; i >= 0; i--) {
       System.out.print(arr[i] + " ");
output:50 40 30 20 10
3)import java.util.Scanner;
class Main {
  public static void main(String[] args) {
   String str="I Love Zoho";
   String str1[]=str.split(" ");
   System.out.println(str1[0]);
   for(int i=str1.length-1;i>=0;i--)
     System.out.print(str1[i]+" ");
  }
```

```
}
Output:
Zoho Love I
Day-3
Task
import java.util.Scanner;
class BankAccount {
  double balance = 0;
  void deposit(double amount) {
    balance += amount;
    System.out.println("Deposited: ₹" + amount);
  }
  void withdraw(double amount) {
    if (amount <= balance) {</pre>
      balance -= amount;
      System.out.println("Withdrawn: ₹" + amount);
    } else {
      System.out.println("Not enough balance!");
    }
```

```
}
  void showBalance() {
    System.out.println("Balance: ₹" + balance);
public class Bank {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    BankAccount account = new BankAccount();
    System.out.print("Enter deposit amount: ");
    double dep = sc.nextDouble();
    account.deposit(dep);
    System.out.print("Enter withdraw amount: ");
    double wd = sc.nextDouble();
    account.withdraw(wd);
    account.showBalance();
}
OUTPUT:
Enter deposit amount: 20000
```

```
Deposited: ₹20000.0
Enter withdraw amount: 500
Withdrawn: ₹500.0
Balance: ₹19500.0
Day-4
Task
import java.util.Scanner;
class Person {
  String name;
  int age;
  void getDetails(Scanner sc)
  {
    System.out.print("Enter name: ");
    name = sc.nextLine();
    System.out.print("Enter age: ");
    age = sc.nextInt();
  }
  void showDetails()
  {
    System.out.println("Name: " + name);
    System.out.println("Age: " + age);
 }
}
```

```
class Employee extends Person {
  double basicSalary;
  double hra;
  double da;
  void setSalary(Scanner sc) {
    System.out.print("Enter basic salary: ");
    basicSalary = sc.nextDouble();
    hra = 0.2 * basicSalary;
    da = 0.1 * basicSalary;
  }
  double calculateSalary() {
    return basicSalary + hra + da;
  }
  void displaySalary() {
    System.out.println("Total Salary: ₹" + calculateSalary());
  }
}
public class SalaryDemo {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    Employee emp = new Employee();
```

```
emp.getDetails(sc);
    emp.setSalary(sc);
    System.out.println("\nEmployee Details:");
    emp.showDetails();
    emp.displaySalary();
    sc.close();
 }
}
OUTPUT:
Enter name: sanjith
Enter age: 20
Enter basic salary: 1200001
Employee Details:
Name: sanjith
Age: 20
Total Salary: ₹1560001.3
import java.util.Scanner;
class Student {
  String name;
  int rollNo;
  int mark1, mark2, mark3;
```

```
void getDetails() {
  Scanner sc = new Scanner(System.in);
  System.out.print("Enter student name: ");
  name = sc.nextLine();
  System.out.print("Enter roll number: ");
  rollNo = sc.nextInt();
  System.out.print("Enter mark 1: ");
  mark1 = sc.nextInt();
  System.out.print("Enter mark 2: ");
  mark2 = sc.nextInt();
  System.out.print("Enter mark 3: ");
  mark3 = sc.nextInt();
}
void displayResult() {
  int total = mark1 + mark2 + mark3;
  float average = total / 3f;
  System.out.println("\n--- Student Result ---");
  System.out.println("Name: " + name);
  System.out.println("Roll No: " + rollNo);
```

```
System.out.println("Marks: " + mark1 + ", " + mark2 + ", " + mark3);
    System.out.println("Total: " + total);
    System.out.println("Average: " + average);
    if (average >= 50) {
      System.out.println("Result: Pass");
    } else {
      System.out.println("Result: Fail");
 }
public class StudentManagement {
  public static void main(String[] args) {
    Student s1 = new Student();
    s1.getDetails();
    s1.displayResult();
}
Output:
Enter student name: sanjith
Enter roll number: 25
Enter mark 1:70
Enter mark 2: 65
Enter mark 3: 80
```

```
--- Student Result ---
Name: sanjith
Roll No: 25
Marks: 70, 65, 80
Total: 215
Average: 71.66664
Result: Pass
Method OverLoading
class Sum {
  int multiply(int a, int b) {
    return a * b;
  }
  double multiply(double a, double b) {
    return a * b;
  }
}
public class Main {
  public static void main(String[] args) {
    Sum s1 = new Sum();
    System.out.println(s1.multiply(2, 3));
    System.out.println(s1.multiply(2.5, 3.5));
```

```
}
OUTPUT:
6
8.75
Using Scanner:
class Sum {
  int multiply( int a,int b) {
    return a * b;
  }
  double multiply(double a1, double b1) {
    return a1 * b1;
  }
}
public class Main {
  public static void main(String[] args) {
    Sum s1 = new Sum();
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter the Value1:");
    int a=sc.nextInt();
```

```
System.out.println("Enter the value2:");
    int b=sc.nextInt();
    System.out.println("The Multiplied Integer Values Are:" +
s1.multiply(a,b));
    System.out.println("Enter the Value1:");
    double a1=sc.nextDouble();
    System.out.println("Enter the value2:");
    double b1=sc.nextDouble();
    System.out.println("The Multiplied Double Values Are:" +
s1.multiply(a1,b1));
  sc.close();
 }
OUTPUT:
Enter the Value1:
2
Enter the value2:
2
The Multiplied Integer Values Are:4
Enter the Value1:
3
Enter the value2:
3.5
The Multiplied Double Values Are:10.5
Day-5
```

```
Task
import java.util.*;
class Main {
  public static void main(String[] args) {
    try {
      int a = 10 / 0;
      String str = null;
      System.out.println(str.length());
    }
    catch (ArithmeticException ae) {
      System.out.println(
        "Caught ArithmeticException: " + ae);
    }
    catch (NullPointerException ae) {
      System.out.println(
        "Caught NullPointerException: " + ae);
    }
  }
}
OUTPUT:
Caught ArithmeticException: java.lang.ArithmeticException: / by zero
 package oops.ExceptionHandling;
import java.io.File;
import java.io.IOException;
import java.nio.file.Files;
```

```
public class SimpleFileReader {
  public static void main(String[] args) {
    String filePath = "C:\\Users\\casstudent\\Desktop\\addon java";
    File file = new File(filePath);
    if (file.exists()) {
      try {
        String content = new String(Files.readAllBytes(file.toPath()));
        System.out.println(content);
      } catch (IOException e) {
        System.out.println("Error reading the file.");
    } else {
      System.out.println("File not found: " + filePath);
  }
OUTPUT:
Error reading the file.
 READ TEXT FILE:
 package oops. Exception Handling;
import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;
```

```
public class FileReader {
  public static void main(String[] args) {
    File file = new
File("C:\\Users\\casstudent\\eclipse-workspace\\Javaprograms\\src\\oops\\Exce
ptionHandling\\n.txt");
    try (Scanner reader = new Scanner(file)) {
      while (reader.hasNextLine()) {
        System.out.println(reader.nextLine());
    } catch (FileNotFoundException e) {
      System.out.println("File not found!");
OUTPUT:
hi
 WRITE TEXT FILE:
package oops.ExceptionHandling;
import java.io.FileWriter;
import java.io.IOException;
public class FileWriterPro {
  public static void main(String[] args) {
```

```
try (FileWriter writer = new
FileWriter("C:\\Users\\casstudent\\eclipse-workspace\\Javaprograms\\src\\oops\
\ExceptionHandling\\n.txt")) {
      writer.write("Line 1\nLine 2\nLine 3\n");
      System.out.println("File written successfully.");
    } catch (IOException e) {
      System.out.println("Error writing to file.");
OUTPUT:
File written successfully.
Day-6
Task
import java.util.HashSet;
import java.util.Scanner;
public class UniqueEmailsFixed {
  public static void main(String[] args) {
```

```
HashSet<String> emailSet = new HashSet<>();
    Scanner sc = new Scanner(System.in);
    System.out.print("How many email addresses you want to
enter?");
    int count = sc.nextInt();
    sc.nextLine();
    for (int i = 0; i < count; i++) {
      System.out.print("Enter email" + (i + 1) + ":");
      String email = sc.nextLine();
      if (emailSet.add(email)) {
```

```
System.out.println("Email added.");
      } else {
        System.out.println("Duplicate email. Not added.");
      }
2)
package coursepack;
import java.util.HashMap;
import java.util.Scanner;
public class StudentMarksAverage {
  public static void main(String[] args) {
```

```
HashMap<String, Integer> studentMarks = new
HashMap<>();
    Scanner sc = new Scanner(System.in);
    System.out.print("Enter number of students: ");
    int count = sc.nextInt();
    sc.nextLine();
    for (int i = 0; i < count; i++) {
      System.out.print("Enter student name: ");
      String name = sc.nextLine();
      System.out.print("Enter marks for " + name + ": ");
```

```
int marks = sc.nextInt();
  sc.nextLine(); // consume newline
  studentMarks.put(name, marks);
}
int total = 0;
for (int marks : studentMarks.values()) {
  total += marks;
}
```

```
double average = (double) total / studentMarks.size();
  System.out.println("\nStudent Marks:");
  for (String name : studentMarks.keySet()) {
    System.out.println(name + " -> " + studentMarks.get(name));
  }
  System.out.println("\nAverage Marks: " + average);
  sc.close();
}
```

```
}
3)
package coursepack;
class MyThread extends Thread {
  @Override
  public void run() {
    for (int i = 1; i \le 10; i++) {
      System.out.println("Thread: " + i);
```

```
public class threadoh {
  public static void main(String[] args) {
    MyThread thread = new MyThread();
    thread.start();
  }
    }
    System.out.println("\nUnique email addresses:");
    for (String email: emailSet) {
      System.out.println(email);
    }
```

```
}
Day-9
Task
mysql> create table students(
 -> roll_no int,
 -> student_name varchar(20),
 -> department varchar(15));
Query OK, 0 rows affected (0.08 sec)
mysql> desc students;
+----+
     | Type | Null | Key | Default | Extra |
| Field
+-----+
```

sc.close();

}

```
| roll_no
          | int
                 YES | NULL |
student name | varchar(20) | YES | NULL |
| department | varchar(15) | YES | NULL |
+-----+
3 \text{ rows in set } (0.00 \text{ sec})
mysql> insert into student profile values(1,'Nikash','cs'),(2,'abhi','it'),(3,'sathish','bca');
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> insert into students values(1,'Nikash','cs'),(2,'abhi','it'),(3,'sathish','bca');
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0
mysql> select * from students;
+----+
| roll_no | student_name | department |
+----+
   1 | Nikash | cs |
   2 | abhi
           | it |
   3 | sathish | bca
+----+
3 \text{ rows in set } (0.00 \text{ sec})
mysql> insert into students values (4, 'Suba', 'biotech'), (5, 'Sanjay', 'Bcom');
Query OK, 2 rows affected (0.03 sec)
Records: 2 Duplicates: 0 Warnings: 0
mysql> select * from students;
+----+
| roll_no | student_name | department |
+----+
    1 | Nikash | cs |
   2 | abhi
           | it
```

```
3 | sathish
              | bca
   4 | Suba
              biotech
              | Bcom
   5 | Sanjay
+----+
5 rows in set (0.00 \text{ sec})
mysql> update students set course fee='36500' where rollno='1'
 ->;
ERROR 1054 (42S22): Unknown column 'rollno' in 'where clause'
mysql> update students set course fee='36500' where rollno='1';
ERROR 1054 (42S22): Unknown column 'rollno' in 'where clause'
mysql> update students set course_fee='36500' where roll_no='1';
ERROR 1054 (42S22): Unknown column 'course_fee' in 'field list'
mysql> alter table students add column course_fee int;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> select * from students;
+----+
| roll_no | student_name | department | course_fee |
+----+
   1 | Nikash
                          NULL |
              cs
   2 | abhi
              | it
                        NULL |
   3 | sathish
             bca
                          NULL |
   4 | Suba
              | biotech |
                           NULL |
              | Bcom
    5 | Sanjay
                            NULL |
+----+
5 rows in set (0.00 \text{ sec})
mysql> update students set course_fee='36500' where rollno='1';
```

ERROR 1054 (42S22): Unknown column 'rollno' in 'where clause'

mysql> update students set course fee=36500 where rollno=1;

```
ERROR 1054 (42S22): Unknown column 'rollno' in 'where clause'
mysql> update students set course_fee=36500 where roll_no=';
ERROR 1292 (22007): Truncated incorrect DOUBLE value: ';
mysql> update students set course_fee=36500 where roll_no=1;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> alter table students drop column course_fee;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> create table course_details(
 -> dept_id int,
 -> course_name,
  -> course_fee;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near ',
course_fee' at line 3
mysql> create table course_details(
 -> dept_id int,
 -> course_name varchar(25),
 -> course_fee int);
Query OK, 0 rows affected (0.04 sec)
mysql> select * from course_details;
Empty set (0.00 sec)
mysql> desc course_details
+----+
```

```
| Type | Null | Key | Default | Extra |
| Field
+----+
| dept id | int
                YES | NULL | |
| course_name | varchar(25) | YES | NULL |
course_fee | int | YES | NULL | |
+-----+
3 \text{ rows in set } (0.00 \text{ sec})
mysql> insert into course_detils values(
 -> 1001,'cs',35500),
 -> (2005,'it',36000),
 -> (3008,'bca',35000),
 -> (5006, 'biotech', 40000),
  -> (6057,'bcom',36500));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near ')' at line 6
mysql> insert into course_detils values(
 -> 1001,'cs',35500),
 -> (2005,'it',36000),
 -> (3008,'bca',35000),
 -> (5006, 'biotech', 40000),
 -> (6057,'bcom',36500);
ERROR 1146 (42S02): Table 'kgcas.course_detils' doesn't exist
mysql> insert into course_detils values(
 -> 1001,'cs',35500),
 -> (2005,'it',36000),
 -> (3008,'bca',35000),
 -> (5006, 'biotech', 40000),
  -> (6057,'bcom',36500);
ERROR 1146 (42S02): Table 'kgcas.course_detils' doesn't exist
mysql> insert into course_details values(
  -> 1001, 'cs', 35500),
```

```
-> (2005,'it',36000),
 -> (3008,'bca',35000),
 -> (5006, 'biotech', 40000),
 -> (6057,'bcom',36500);
Query OK, 5 rows affected (0.04 sec)
Records: 5 Duplicates: 0 Warnings: 0
mysql> select * from course_details;
+----+
| dept_id | course_name | course_fee |
+----+
  1001 | cs | 35500 |
  2005 | it
                 36000
  3008 | bca
             35000 |
  5006 | biotech |
                   40000
  6057 | bcom
                   36500 |
+----+
5 rows in set (0.00 sec)
mysql> alter table students drop column department;
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table students add column dept_id int;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> select * from students;
+----+
| roll_no | student_name | dept_id |
+----+
   1 | Nikash | NULL |
```

```
2 | abhi
           | NULL|
   3 | sathish | NULL |
   4 | Suba
              | NULL|
   5 | Sanjay | NULL |
+----+
5 rows in set (0.00 \text{ sec})
mysql> update students set dept_id=1001 where roll_no=1;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from students;
+----+
| roll_no | student_name | dept_id |
+----+
   1 | Nikash | 1001 |
   2 | abhi
           | NULL|
   3 | sathish | NULL |
   4 | Suba
              | NULL|
   5 | Sanjay | NULL |
+----+
5 rows in set (0.00 sec)
mysql> update students set dept_id=2005 where roll_no=2;
Query OK, 1 row affected (0.03 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> update students set dept_id=3008 where roll_no=3;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> update students set dept_id=5006 where roll_no=4;
```

```
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> update students set dept_id=6057 where roll_no=5;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from students;
+----+
| roll_no | student_name | dept_id |
+----+
    1 | Nikash | 1001 |
    2 | abhi
               | 2005 |
    3 | sathish | 3008 |
    4 | Suba
                5006
    5 | Sanjay | 6057 |
+----+
5 rows in set (0.00 \text{ sec})
create table slibrary(
  -> stname varchar(10),
  -> rollno int,
  -> dep varchar(50));
Query OK, 0 rows affected (0.02 sec)
mysql> insert into slibrary('suba',49,'it'),('sanjay',38,'it'),('nik',25,'it');
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near
"suba',49,'it'),('sanjay',38,'it'),('nik',25,'it')' at line 1
mysql> insert into slibrary values('suba',49,'it'),('sanjay',38,'it'),('nik',25,'it');
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
mysql> select * from slibrary;
+----+
| stname | rollno | dep |
+----+
| suba | 49 | it |
| sanjay | 38 | it |
| nik | 25 | it |
+----+
3 \text{ rows in set } (0.00 \text{ sec})
mysql> create table blibrary(
  -> bookid int,
  -> bookname varchar(50),\
  -> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near ')' at line 4
mysql> create table blibrary(
  -> bookid int,
  -> bookname varchar(50),
  -> booktype varchar(30));
Query OK, 0 rows affected (0.02 sec)
mysql> insert into blibrary values(102030, 'atomic habits', 'self-help
category'),(11244,'War and Peace,'historical fiction'),(342441,'Ulysses','novel');
  '>
  '>;
  '> insert into blibrary values(102030, 'atomic habits', 'self-help category'),(11244, 'War
and Peace, 'historical fiction'), (342441, 'Ulysses', 'novel');
```

```
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'historical fiction'),(342441,'Ulysses','novel');
```

```
;
);
insert into blibrary valu' at line 1
mysql> insert into blibrary values(102030,'atomic habits','self-help
category'),(11244,'War and Peace','historical fiction'),(342441,'Ulysses','novel');
Query OK, 3 rows affected (0.00 sec)
Records: 3 Duplicates: 0 Warnings: 0
mysql> select * from blibrary;
+----+
| bookid | bookname | booktype
+----+
| 102030 | atomic habits | self-help category |
| 11244 | War and Peace | historical fiction |
| 342441 | Ulysses
                    novel
+----+
3 \text{ rows in set } (0.00 \text{ sec})
mysql> create table tlibrary(
  -> bookid int;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near " at line 2
mysql> create table tlibrary(
  -> bookid int,
  -> duedate date,
  -> returndate date);
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> insert into tlibrary
values(102030,'2025-06-16','2025-06-26'),(11244,'2025-06-20','2025-06-30'),(342441,'2
025-06-06','2025-06-16');
Query OK, 3 rows affected (0.00 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> select * from tlibrary;
+-----+-----+
| bookid | duedate | returndate |
+-----+
| 102030 | 2025-06-16 | 2025-06-26 |
```

| 11244 | 2025-06-20 | 2025-06-30 | | 342441 | 2025-06-06 | 2025-06-16 |

+----+

3 rows in set (0.00 sec)