**JAVA PROGRAM**

**DAY 2:ASSIGNMENT**

1. **Check Whether a Character is a Vowel or Consonant**

o Input: A single alphabet character

o Output: Whether it is a vowel or a consonant

o Example: 'a' → Vowel, 'z' → Consonant

**Soln:**

**package** Practice;

**import** java.util.Scanner;

**public** **class** Character {

**public** **static** **void** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

**char** c=sc.next().charAt(0);

**if** (c=='a'||c=='e'||c=='i'||c=='o'||c=='u'||c=='A'||c=='E'||c=='I'||c=='O'||c=='U' )

{

System.***out***.println(c +" is a vowel letter");

}

**else** {

System.***out***.println(c +" is a consonant letter");

}}}

**Output:**

f

f is a consonant letter

1. **Print the Grade Based on Marks**

o Input: Marks (0 to 100)

o Use if-else ladder to print: 

* 90–100 → Grade A 
* 75–89 → Grade B 
* 60–74 → Grade C 
* 40–59 → Grade D 
* Below 40 → Fail

**Soln:**

**package** Practice;

**import** java.util.Scanner;

**public** **class** Character {

**public** **static** **void** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

**int** n=sc.nextInt();

**if**(n>=90)

{

System.***out***.println("A Grade");

}

**else** **if**(n>=75 && n<=89)

{

System.***out***.println("B Grade");

}

**else** **if**(n>=60 && n<=74) {

System.***out***.println("C Grade");

}

**else** **if**(n>=40 && n<=59) {

System.***out***.println("D Grade");

}

**else**

{

System.***out***.println("Fail");

}}

}

**Output:**

95

A Grade

1. **Simple Interest or Compound Interest Calculator**

o Input: User chooses 1 for Simple Interest, 2 for Compound Interest

o Take input for P (principal), R (rate), T (time)

o Output: Display the calculated interest

Soln:

**package** Practice;

**import** java.util.Scanner;

**public** **class** Character {

**public** **static** **void** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

**int** p=sc.nextInt();

**int** rate=sc.nextInt();

**int** time=sc.nextInt();

**int** ch=sc.nextInt();

**switch** (ch) {

**case** 1:

**int** SI=(p\*rate\*time)/100;

System.***out***.println("The Simple Interest is: "+ SI);

**break**;

**case** 2:

**double** A = p \* Math.*pow*((1 + (rate / 100.0) / n), n \* time);

**double** CI = A - p;

**int** amount=A-p;

System.***out***.println(amount);

}

}

**Output:**

10000

5

2

2

2

The Compound Interest is : 1038.1289062499945

1. **Print All Prime Numbers from 1 to N**

o Input: A number N

o Output: All prime numbers between 1 and N using for loop and if conditions

**Soln:**

**package** Practice;

**import** java.util.Scanner;

**public** **class** Character {

**public** **static** **void** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

**int** N=sc.nextInt();

**for**(**int** num=2;num<=N;num++)

{

**int** count=0;

**for**(**int** i=2;i<=num/2;i++) {

**if**(num%i==0)

{

count++;

**break**;

}

}

**if**(count==0)

{

System.***out***.println(num);

}

}

}

}

Output:

20

2

3

5

7

11

13

17

19