**Assignment 2**

Control Statements – Assignment Questions

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

package Assignment2;

import java.util.\*;

public class VowelorConsonant {

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("it is a vowel");

}

else

{

System.***out***.println("it is a consonant");

}

}

}

Output:

a

it is a vowel

h

it is a consonant

2. 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

package Assignment2;

import java.util.\*;

public class GradeMarks {

public static void main(String[] args) {

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

int n= sc.nextInt();

if(n>=90 && n<=100) {

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

}

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

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

}

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

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

}

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

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

}

else {

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

}

}

}

Output:

50

Grade D

3. 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

package Assignment2;

import java.util.\*;

public class InterestCompound {

public static void main(String[] args) {

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

int p =sc.nextInt();

int r =sc.nextInt();

int t =sc.nextInt();

int interest=sc.nextInt();

switch(interest)

{

case(1):

int simple\_interest= (p\*r\*t)/100;

System.***out***.println("SimpleInterest:"+simple\_interest);

break;

case(2):

double compound\_interest=p\*Math.*pow*((1+r/100.0),t)-p;

System.***out***.println("CompoundInterest:"+compound\_interest);

break;

default:

System.***out***.println("Invalid Value");

}

}

}

Output:

1000

5

2

1

SimpleInterest:100

4. 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

package Assignment2;

import java.util.\*;

public class PrimeNumber {

public static void main(String[] args) {

for (int n=2; n<= 100; n++) {

int count = 0;

for (int i = 1; i <= n; i++) {

if (n % i == 0) {

count++;

}

}

if (count == 2) {

System.***out***.print(n+ " ");

}

}

}

}

Output:

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97