Assignment NO.2

Q.1 Create an algorithm and flowchart for a program that inputs the marks of a student and displays "Pass" if marks are 40 or more. Otherwise, it displays "Fail".

1. Start.
2. Declare marks
3. Input the marks
4. Check whether if the input marks are greater than or equal to 40.
5. then print applicant is passed
6. If the input marks are less than 40
7. then print applicant is failed.
8. Stop.

Q.2 Create an algorithm and flowchart for a program that determines if a given number is odd or even.

1. Start.
2. Declare a variable Num.
3. Input the number.
4. If the input number when divisible by 2 give remainder equal to 0.
5. then print input number is even number.
6. Else print the number is odd number.
7. Stop.

Q.3 Create an algorithm and flowchart for a program that determines whether a given year is a leap year or not.

1. Start.
2. Declare a variable year.
3. Input the year.
4. If the input value of year is divisible by 4.
5. Print it is a leap year.
6. Else print it is not a leap year
7. Stop.

Q.4 Design an algorithm and flowchart for a program that checks whether a given number is positive, negative, or zero.

1. Start
2. Declare a number.
3. Input the value of the number.
4. If the entered number is less than 0.

5. Then print entered number is negative
6. Else If the entered number is greater than 0.
7. Then print entered number is a positive number
8. Else print the entered number is zero.
9. Stop.

Q.5 Design an algorithm and flowchart for a program that finds the largest among three givens numbers.

1. Start
2. Declare three numbers NO1, NO2, NO3.
3. Input the values of the three number
4. Check if the NO1 is greater than NO2 and the NO1 is greater than NO3.
5. Then print the NO1 is the largest of three numbers
6. Else if the NO2 is greater than NO1 and the NO2 is greater than NO3.
7. Then print the if the NO1 is greater than NO2 and the NO1 is greater
8. than print NO2 is greatest among the three numbers
9. Else print theNO3 is greater
10. Stop

6. Design a pseudocode and flowchart for a program that takes input from the user regarding the purchase amount. The program should calculate and display the discount based on the following criteria: If the purchase amount is greater than or equal to Rs.1000, apply a 10% discount; otherwise, no discount is applied.

1. Start.
2. Declare P_A, discount.
3. Input value of P_A.
4. If (P_A >= 1000)
   4.1Then discount =P_A*10%
   4.2 Print discount
5. Else (P_A<1000)
   5.1 Then Print “No Discount”.
6. Stop

7. Design a pseudocode and flowchart to create a grade calculator program. Input the marks obtained by a student and output the corresponding grade based on the following criteria: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: Below 60.

1. Start.
2. Declare marks.
3. Input marks.
4. If (marks <=100 && marks >=90)
   4.1 Then Print “A Grade”

5. If (marks <=89 && marks >=80)
   5.1 Then Print “B Grade”
6. If (marks <=79 && marks >=70)
   6.1 Then Print “C Grade”
7. If (marks <=69 && marks >=60)
   7.1 Then Print “D Grade”
8. Else
   8.1 Print “F Grade”
9. Stop.

8. Design a pseudocode and flowchart for a program that checks if a given character is a vowel or consonant.

1. Start.
2. Declare a character variable Ch.
3. Input a character (in small letters), Ch.
4. If (Ch==” A” || Ch==” E” || Ch==” I” || Ch==” O” || Ch==” U”)
   4.1 Then Print “It’s a Vowel “
5. Else
   5.1 Print “It’s a consonant”
6. Stop.

9. Design the pseudocode and flowchart for a program that asks the user for their age.

Determine if the user is eligible to vote based on the following criteria: Age >= 18.

1. Start.
2. Declare age.
3. Input age
4. If (age>=18)
   4.1 Then Print “eligible to vote “
5. Else
   5.1 print “Not Eligible to vote”
6. Stop

10. Design the pseudocode and flowchart for a program that asks the user to input a number between 1 and 7. The program then displays the corresponding weekday name.

1. Start.
2. Declare number, num
3. Input the value of the number
4. If (num ==1)
   4.1 Then Print “Monday”
5. Else If (num==2)
   5.1 Then Print “Tuesday”
6. Else If (num==3)

6.1 Then Print “Wednesday”

7. Else If (num==4)
   7.1 Then Print “Thursday”
8. Else If (num==5)
   8.1 Then Print “Friday”
9. Else If (num==6)
   9.1 Then Print “Saturday”
10. Else If (num==7)
    10.1 Then Print “Sunday”
11. Else
    11.1 Print “Invalid Number”
12. Stop