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import java.lang.*;
import java.io.*;
import java.util.*;
import java.util.Scanner;
public class Grade_Calculator
{
    static char grade;
    static double grade_point;
    static double cred;
    static double sum_cred_point=0;
    static double cred1=0;
    static double s1=0;
    static int q;
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);

        System.out.println("_____");
        System.out.println(" ");
        System.out.println("      ^^*** WELCOME ***^^");
        System.out.println("_____");
        System.out.println(" ");
        System.out.println("Enter The Operation To Be Performed :-");
        System.out.println(" ");
        System.out.println("1. SGPA CALCULATOR");
        System.out.println("2. CGPA CALCULATOR");
        System.out.println("3. PERCENTAGE CALCULATOR");
        System.out.println(" ");
        System.out.println("Enter Your Choice From Above");
        int choice=sc.nextInt( );
        System.out.println(" ");
        switch(choice)
        {
            case 1: System.out.println("Enter The No. Of Subjects You
Have :-");
                int n=sc.nextInt( );
                for(int i=1;i<=n;i++)
                {
                    System.out.println(" ");
                    System.out.printf("Enter Information About Subject %d\n",i);
                    System.out.println(" ");
                    System.out.println("Enter Subject Credit In Digits :");
                    double cred_point=sc.nextDouble( );
                    System.out.println(" ");
                    System.out.println("Enter Subject Grade In Capital :");
                    grade=sc.next( ).charAt(0 );

                    System.out.println("_____");
                    if(grade=='O')
                    {
                        grade_point=10;
                    }
                    else if(grade=='E')
                    {
                        grade_point=9;
                    }
                    else if(grade=='A')
                    {
                        grade_point=8;
                    }
                }
            }
        }
    }
}

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    }
    else if(grade=='B')
    {
        grade_point=7;
    }
    else if(grade=='C')
    {
        grade_point=6;
    }
    else if(grade=='D')
    {
        grade_point=5;
    }
    else if(grade=='F')
    {
        grade_point=2;
    }
    else if(grade=='M')
    {
        grade_point=0;
    }
    else if(grade=='S')
    {
        grade_point=0;
    }
    if(i<=n)
    {
        cred =cred_point * grade_point;
        cred1=cred1+cred;

        sum_cred_point=sum_cred_point+cred_point;
    }
}

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    }
    double sgpa=cred1/sum_cred_point;
    System.out.println("Take Your SGPA Correct To Two Decimal Places");
    System.out.println(" ");
    System.out.println("Your SGPA is " +sgpa);
    System.out.println(" ");
    System.out.println("_____");
    System.out.println(" ");
    System.out.println("    ^^***  THANK YOU  ***^^");
    System.out.println("_____");
    break;
case 2: System.out.println("Enter The Number Of Semesters You
Have :-");
    int m=sc.nextInt( );
    System.out.println(" ");
    System.out.println("Please Enter Your Corresponding Semester
SGPA :");
    System.out.println(" ");
    for(int j=1;j<=m;j++)
    {
        System.out.printf("SGPA Of Semester %d is :\n",j);
        double s=sc.nextDouble( );
    }
}

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        System.out.println("_____");
        System.out.println(" ");
        q=m;
        s1=s1+s;

    }
    double cgpa=s1/q;
    System.out.println("Take Your CGPA Correct To Two Decimal Places");
    System.out.println(" ");
    System.out.println("Your CGPA is " + cgpa);
    System.out.println(" ");
    System.out.println("_____");
    System.out.println(" ");
    System.out.println("    ^^*** THANK YOU ***^^");
    System.out.println("_____");
    break;
    case 3: System.out.println("Enter Your CGPA :-");
    double cgpa_ = sc.nextDouble( );
    double percent = ((cgpa_ - 0.5)*10);
    System.out.println("_____");
    System.out.println("Take Your PERCENTAGE Correct To Two Decimal
Places");
    System.out.println(" ");
    System.out.println("Your PERCENTAGE is " + percent);
    System.out.println(" ");
    System.out.println("_____");
    System.out.println(" ");
    System.out.println("    ^^*** THANK YOU ***^^");
    System.out.println("_____");
    break;
    default : System.out.println("Invalid Input");
    System.out.println(" ");
    System.out.println("_____");
    System.out.println(" ");
    System.out.println("    !!! PLEASE TRY AGAIN !!!");
    System.out.println("_____");
}

}
}

```