#include <iostream>

#include <string>

#include <iomanip>

using namespace std;

int main(){

int studId,yr;

string name,course;

double prelim,midterm,sfinal,final,totalScore = 0, averageScore=0;

cout<<"Student id: ";

cin>>studId;

cin.ignore();

cout<<"Name: ";

getline(cin,name);

cout<<"Course: ";

getline(cin,course);

cout<<"Year: ";

cin>>yr;

cout<<"4 Major Exams\n";

cout<<"\tPrelim: ";

cin>>prelim;

cout<<"\tMidterm: ";

cin>>midterm;

cout<<"\tSemifinal: ";

cin>>sfinal;

cout<<"\tFinal: ";

cin>>final;

totalScore = prelim + midterm + sfinal + final;

averageScore = totalScore / 4;

cout<<"Total Score: "<<totalScore;

cout<<"\nAverage Score: "<<fixed<<setprecision(2)<<averageScore;

/\*

if(averageScore>=70)

cout<<"\nPASSED\n";

else

cout<<"\nFAILED\n";\*/

if(averageScore >= 70)

cout<<"\nPASSED\n";

if(averageScore <70 )

cout<<"\nFAILED";

return 0;

}

/\*Compute the weekly salary of an employee. The regular working hours per week is 48 hours.

If the employee will work beyond 48 hours, his/her rate beyond the 48 hours will be

50% more than the regular rate.

\*/

#include <stdio.h>

int main(){

char name;

int hw;

float hr,sal=0;

printf("Name: ");

scanf("%[^\n]s",&name);

printf("Hours Worked: ");

scanf("%d",&hw);

printf("Hourly Rate: ");

scanf("%f",&hr);

/\*

if(hw>=0 && hw<=48)

sal = hw \* hr;

else

sal = 48\*hr + ((hw - 48)\*hr\*1.5);

printf("Salary: %.2f",sal);

\*/

sal = (hw>=0 && hw<=48)?hw \* hr: 48\*hr + ((hw - 48)\*hr\*1.5);

printf("Salary: %.2f",sal);

return 0;

}

/\* Machine Problem 5

Make a program that will ask the user to enter a number. The program should

determine if the number entered is positive odd, negative odd, positive even, or

negative even.

Programmer: Vannessa Ruth A. Navarez

Date: October 12, 2021

USING SWITCH-CASE and IF-ELSE

\*/

#include <iostream>

using namespace std;

int main (){

int num;

cout<<"Enter a number: ";

cin>>num;

switch(num%2==0){

case 0:

if (num < 0)

cout<<num<<" is a NEGATIVE ODD number!\n";

else

cout<<num<<" is a POSITIVE ODD number!\n";

break;

case 1:

if (num>0)

cout<<num<<" is a POSITIVE EVEN number!\n";

else

cout<<num<<" is a NEGATIVE EVEN number!\n";

}

return 0;

}

/\*Machine Problem #4 - C  
 Calculate the tax due or the refund for a family based on the following imaginary formula.

1. For each dependent deduct P1,000.00 from income.

2. Determine tax rate from the following brackets:

Programmer: Navarez, Vannessa Ruth A.

Date: October 6, 2021

\*/

#include <iostream>

#include <iomanip>

using namespace std;

int main (){

float last, payroll, taxable=0, deduc=0, tax=0, due=0;

int depend;

cout<<"Enter total income last year: ";

cin>>last;

cout<<"Enter total payroll deduction: ";

cin>>payroll;

cout<<"Enter number of dependents: ";

cin>>depend;

cout<<"\nTotal Income: "<<setprecision(2)<<fixed<<last;

cout<<"\nNumber of dependants: "<<depend;

deduc = depend\*1000;

taxable = last - deduc;

cout<<"\nTaxable Income: "<<taxable<<fixed<<setprecision(2);

if (taxable <= 10000){

tax = taxable \* 0.02;

}

else if (taxable>10000 && taxable<=20000){

tax = taxable \* 0.05;

}

else if (taxable>20000 && taxable<=30000){

tax = taxable \* 0.07;

}

else if (taxable>30000 && taxable<=50000){

tax = taxable \* 0.10;

}

else if (taxable>50000){

tax = taxable \* 0.15;

}

cout<<"\nTotal tax: "<<tax<<fixed<<setprecision(2);

cout<<"\nTax already paid: "<<fixed<<setprecision(2)<<payroll;

due = tax - payroll;

cout<<"\nTax due: "<<due<<fixed<<setprecision(2)<<endl;

return 0;

}

/\* Machine Problem 4 – C++  
 Calculate the tax due or the refund for a family based on the following imaginary formula.

1. For each dependent deduct P1,000.00 from income.

2. Determine tax rate from the following brackets:

Programmer: Navarez, Vannessa Ruth A.

Date: October 6, 2021

\*/

#include <iostream>

#include <iomanip>

using namespace std;

int main (){

float last, payroll, taxable=0, deduc=0, tax=0, due=0;

int depend;

cout<<"Enter total income last year: ";

cin>>last;

cout<<"Enter total payroll deduction: ";

cin>>payroll;

cout<<"Enter number of dependents: ";

cin>>depend;

cout<<"\nTotal Income: "<<setprecision(2)<<fixed<<last;

cout<<"\nNumber of dependants: "<<depend;

deduc = depend\*1000;

taxable = last - deduc;

cout<<"\nTaxable Income: "<<taxable<<fixed<<setprecision(2);

if (taxable <= 10000){

tax = taxable \* 0.02;

}

else if (taxable>10000 && taxable<=20000){

tax = taxable \* 0.05;

}

else if (taxable>20000 && taxable<=30000){

tax = taxable \* 0.07;

}

else if (taxable>30000 && taxable<=50000){

tax = taxable \* 0.10;

}

else if (taxable>50000){

tax = taxable \* 0.15;

}

cout<<"\nTotal tax: "<<tax<<fixed<<setprecision(2);

cout<<"\nTax already paid: "<<fixed<<setprecision(2)<<payroll;

due = tax - payroll;

cout<<"\nTax due: "<<due<<fixed<<setprecision(2)<<endl;

return 0;

}

/\* Machine Problem 3

Using the conditional or selection control structures, create a program that will prompt the user to enter 5 numbers. Thereafter the program will determine the smallest and the largest number.

Programmer: Vannessa Ruth A. Navarez

Date: September 29, 2021

\*/

#include <stdio.h>

int main (){

int num1, num2, num3, num4, num5;

printf ("Enter number 1: ");

scanf ("%d", &num1);

printf ("Enter number 2: ");

scanf ("%d", &num2);

printf ("Enter number 3: ");

scanf ("%d", &num3);

printf ("Enter number 4: ");

scanf ("%d", &num4);

printf ("Enter number 5: ");

scanf ("%d", &num5);

if (num1<num2 && num1<num3 && num1<num4 && num1<num5)

printf ("Smallest: %d\n", num1);

else if (num2<num3 && num2<num4 && num2<num5)

printf ("Smallest: %d\n", num2);

else if (num3<num4 && num3<num5)

printf ("Smallest: %d\n", num3);

else if (num4<num5)

printf ("Smallest: %d\n", num4);

else

printf ("Smallest: %d\n", num5);

if (num1>num2 && num1>num3 && num1>num4 && num1>num5)

printf ("Largest: %d\n", num1);

else if (num2>num3 && num2>num4 && num2>num5)

printf ("Largest: %d\n", num2);

else if (num3>num4 && num3>num5)

printf ("Largest: %d\n", num3);

else if (num4>num5)

printf ("Largest: %d\n", num4);

else

printf ("Largest: %d\n", num5);

return 0;

}

/\* Machine Problem # 2

Create a C program that will prompt the user to enter the student id, name of the student,

degree, year, and 4 major exam scores (namely, Prelim, Midterm, Semifinal, Final). Thereafter,

the program will calculate and display the total exam score and the average score.

Programmer: Vannessa Ruth A. Navarez

Date: September 15, 2021

\*/

#include <stdio.h>

int main () {

int studID, year;

char name, degree;

float prelim, mid, semi, final,total=0, average=0;

printf ("Student #: ");

scanf ("%d", &studID);

printf ("Name : ");

scanf (" %[^\n]s", &name);

printf ("Degree : ");

scanf (" %[^\n]s", &degree);

printf ("Year : ");

scanf ("%d", &year);

printf ("Major Exam Scores");

printf ("\n");

printf (" Prelim : ");

scanf ("%f",&prelim);

printf (" Midterm : ");

scanf ("%f",&mid);

printf (" Semifinal: ");

scanf ("%f",&semi);

printf (" Final : ");

scanf ("%f",&final);

total=prelim+mid+semi+final;

average=total/4;

printf ("Total Score : %.0f",total);

printf ("\nAverage Score: %.2f",average);

printf ("\n");

return 0;

}

/\*

Machine Problem # 1 - C

-------------------

Create a C program that will prompt the user to enter 2 integers.

The program will display the sum,difference, product, quotient, and remainder.

Programmer: Navarez, Vannessa Ruth A

Date: September, 08, 2021

\*/

#include <stdio.h>

int main() {

int num1, num2, sum=0, diff=0, prod=0, quot=0, rem=0;

printf ("Number 1: ");

scanf ("%d", &num1);

printf ("Number 2: ");

scanf ("%d", &num2);

sum = num1 + num2;

diff = num1 - num2;

prod = num1 \* num2;

quot = num1 / num2;

rem = num1 % num2;

printf("\n");

printf ("The result of %d + %d = %d.", num1, num2, sum);

printf ("\nThe result of %d - %d = %d.", num1, num2, diff);

printf ("\nThe result of %d \* %d = %d.", num1, num2, prod);

printf ("\nThe result of %d / %d = %d.", num1, num2, quot);

printf ("\nThe result of %d %% %d = %d.", num1, num2, rem);

printf("\n");

return 0;

}

/\*

Machine Problem #1 – C++

------------------

Create a C++ program that will prompt the user to enter 2 integers.

The program will display the sum,difference, product, quotient, and remainder.

Programmer: Navarez, Vannessa Ruth A

Date: September, 08, 2021

\*/

#include <iostream.h>

using namespace std;

int main() {

int num1, num2, sum=0, diff=0, prod=0, quot=0, rem=0;

cout<<"Number 1: ";

cin>>num1;

cout<<"Number 2: ";

cin>>num2;

sum = num1 + num2;

diff = num1 - num2;

prod = num1 \* num2;

quot = num1 / num2;

rem = num1 % num2;

cout<<"\n";

cout<<"The result of "<<num1<<" + "<<num2<<" = "<<sum<<"."<<endl;

cout<<"The result of "<<num1<<" - "<<num2<<" = "<<diff<<"."<<endl;

cout<<"The result of "<<num1<<" \* "<<num2<<" = "<<prod<<"."<<endl;

cout<<"The result of "<<num1<<" / "<<num2<<" = "<<quot<<"."<<endl;

cout<<"The result of "<<num1<<" % "<<num2<<" = "<<rem<<".";

cout<<"\n";

return 0;

}

/\* Navarez PRELIM \*/

#include <iostream>

#include <iomanip>

#include <string>

using namespace std;

int main () {

int quan;

string prodNum, prodName;

float price, payment, paid=0, change=0;

cout<<"Enter Product Number : ";

getline(cin,prodNum);

cout<<"Enter Product Name : ";

getline(cin,prodName);

cout<<"Enter Product Price : ";

cin>>price;

cout<<"Enter Quantity Bought: ";

cin>>quan;

paid = price \* quan;

cout<<"\nAmount to be Paid : "<<setprecision(2)<<fixed<<paid<<endl;

cout<<"\nEnter Payment : ";

cin>>payment;

change = payment - paid;

cout<<"\nChange : " <<setprecision(2)<<fixed<<change<<endl;

return 0;

}

BREAKOUT - 1

#include <stdio.h>

int main (){

const double regCharge = 400;

const int regMin = 50;

const double overReg = 8;

const double premCharge = 425;

const int premMin = 75;

const double overPrem = 4;

const int premMinNight = 100;

const double overPremNight = 2;

double regular();

double premium ();

int acc, min, hr;

char serType;

double amountDue=0;

printf ("Account #: ");

scanf ("%d", &acc);

printf ("Service Code : ");

scanf ("%s", &serType);

/\*-------REGULAR-------\*/

if (serType == 'r' || serType == 'R')

{

printf ("Duration in minutes: ");

scanf ("%d", &min);

if (min<=regMin)

amountDue = regCharge;

else

amountDue = regCharge + (min-regMin) \* overReg;

printf ("Amount Due: %.2lf", amountDue);

}

/\*-------PREMIUM-------\*/

else if(serType == 'p' || serType == 'P')

{

printf ("Time 24hr format: ");

scanf ("%d", &hr);

printf ("Duration in minutes: ");

scanf ("%d", &min);

/\*---------DAY---------\*/

if (hr<19 && hr>5)

if (min <= premMin)

amountDue = premCharge;

else

amountDue = premCharge + (min-premMin) \* overPrem;

/\*--------NIGHT--------\*/

else

{

if (min >= premMinNight)

amountDue = premCharge;

else

amountDue = premCharge + (min-premMin) \* overPrem;

}

printf ("Amount Due: %.2lf", amountDue);

}

else

printf ("Invalid Service Code.");

}

/\* Breakout Session #2

Using switch-case statement, create a program that will prompt

the user to enter BINGO numbers.

That is 1 to 15 is ‘B’, 16 to 30 is ‘I’, and so on.

The program will also display "Invalid number" for invalid inputs.

Programmer: Vannessa Ruth A. Navarez

Date: October 18, 2021

\*/

#include <stdio.h>

int main (){

int num;

printf ("BINGO GAME\n");

printf ("Imput Number: ");

scanf ("%d", &num);

switch(num){

case 1:

case 2:

case 3:

case 4:

case 5:

case 6:

case 7:

case 8:

case 9:

case 10:

case 11:

case 12:

case 13:

case 14:

case 15: printf ("B!"); break;

case 16:

case 17:

case 18:

case 19:

case 20:

case 21:

case 22:

case 23:

case 24:

case 25:

case 26:

case 27:

case 28:

case 29:

case 30: printf ("I!"); break;

case 31:

case 32:

case 33:

case 34:

case 35:

case 36:

case 37:

case 38:

case 39:

case 40:

case 41:

case 42:

case 43:

case 44:

case 45: printf ("N!"); break;

case 46:

case 47:

case 48:

case 49:

case 50:

case 51:

case 52:

case 53:

case 54:

case 55:

case 56:

case 57:

case 58:

case 59:

case 60: printf ("G!"); break;

case 61:

case 62:

case 63:

case 64:

case 65:

case 66:

case 67:

case 68:

case 69:

case 70:

case 71:

case 72:

case 73:

case 74:

case 75: printf ("O!"); break;

default: printf ("Invalid Number!");

}

return 0;

}