TOPIC: ASSIGNMENT (LAB 03 , EXERCISE 04)

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1.

#include <iostream>

using namespace std;

int main ()

{ char al;

 cout << "Enter a letter: ";

 cin >> al;

 if (isalpha(al))

 { if ((al=='A') || (al=='a') )

 cout << "It is vowel A";

 else if ((al=='E') || (al=='e'))

 cout << "It is vowel E";

 else if ((al=='I') || (al=='i'))

 cout << "It is vowel I";

 else if ((al=='O') || (al=='o'))

 cout << "It is vowel O";

 else if ((al=='U') || (al=='u'))

 cout << "It is vowel U";

 else

 cout << "It is consonent";

 }

 else

 cout << "It is not a letter";

 return 0;

}

2.

#include <iostream>

using namespace std;

int main ()

{

 int marks[5],i;

 float sum=0,avg;

 cout << "Enter your mark for Test1: ";

 cin >> marks[0];

 cout << "Enter your mark for Assignments: ";

 cin >> marks[1];

 cout << "Enter your mark for Quiz: ";

 cin >> marks[2];

 cout << "Enter your mark for Lab work: ";

 cin >> marks[3];

 cout << "Enter your mark for Final Exam: ";

 cin >> marks[4];

 for (i=0;i<5;i++)

 {

 sum = sum + marks[i];

 }

 cout << "\nTotal Marks of Assessment= " << sum;

 avg = sum/5;

 cout << "\nAverage= " << avg;

 if (avg>=90 && avg<= 100)

 cout << "\nCongratulations, You get A+";

 else if (avg>=80 && avg<=89 )

 cout << "\nCongratulations, You get A";

 else if (avg>=75 && avg<=79)

 cout << "\nCongratulations, You get A-";

 else if (avg>=70 && avg<=74 )

 cout << "\nIt is OK, You get B+";

 else if (avg>=65 && avg<=69 )

 cout << "\nIt is OK, You get B";

 else if (avg>=60 && avg<=64 )

 cout << "\nIt is OK, You get B-";

 else if (avg>=55 && avg<=59 )

 cout << "\nIt still OK, You get C+";

 else if (avg>=50 && avg<=54 )

 cout << "\nIt still OK, You get C";

 else if (avg>=40 && avg<=44 )

 cout << "\nIt still OK, You get D+";

 else if (avg>=35 && avg<=39 )

 cout << "\nOh no, You get D";

 else if (avg>=30 && avg<=34 )

 cout << "\nOh no, You get D-";

 else

 cout << "\nOh no, You get E";

 return 0;

}

3. #include <iostream>

using namespace std;

int main(){

 double totalpay,totalunit;

 cout<<"User code:"<<endl<<"\t1.Household"<<endl<<"\t2.Office"<<endl<<"\t3.Factory"<<endl<<"\t4.Program End"<<endl<<"Num of choice:";

 int choice;

 cin>>choice;

 int code=choice;

 cout<<endl;

 if(code>0 && code<4){

 cout<<"Enter the consumption:"<<endl;

 double totalunit;

 cin>>totalunit;

 if(code==1){

 if(totalunit<=500){

 totalpay=totalunit\*0.10;

}

 else{

 totalpay=(500\*0.10)+(totalunit-500)\*0.25;

 }

 }

 else if(code==2){

 if(totalunit<=1000){

 totalpay=totalunit\*0.25;

 }

 else{

 totalpay=(1000\*0.25)+(totalunit-1000)\*0.50;

 }

 }

 else if(code==3){

 if(totalunit<=1500){

 totalpay=totalunit\*0.50;

 }

else{

 totalpay=(1000\*0.50)+(totalunit-1000)\*0.75;

 }}}

 else if(code==4){

 cout<<"Program has ended"<<endl;

 }

 else

 return 0;}

4)

#include <iostream>

using namespace std;

int main ()

{

 float fahrenheit, celsius;

 int input;

 cout << "1. Convert the temperature from Celsius to Fahrenheit\n"

 << "2. Convert the temperature from Fahrenheit to Celsius\n"

 << "Enter your choice: ";

 cin >> input;

 if (input == 1)

 {

 cout << "Enter the temperature in Celsius: ";

 cin >> celsius;

 fahrenheit = (9 \* celsius) / 5 +32;

 cout << "The temperature in Celsius is: "<< celsius;

 cout << "\nThe temperature in Fahrenheit is: "<< fahrenheit;

 }

 else if (input == 2)

 {

 cout << "Enter the temperature in Fahrenheit: ";

 cin >> fahrenheit;

 celsius = (fahrenheit-32) \* 5 / 9;

 cout << "The temperature in Fahrenheit is: " << fahrenheit;

 cout << "\nThe temperature in celsius is: " << celsius;

 }

}

5)

#include <iostream>

using namespace std;

int main ()

{

 double balance, withdraw, deposite;

 balance = 0;

 int input;

 cout << "1. Display balance \n"

 << "2. Deposite money \n"

 << "3. Withdraw money \n"

 << "4. Exit \n\n"

 << "Enter choice: ";

 cin >> input;

 while (input != 4)

 {

 switch (input)

 {

 case 1: cout << "The current balance in your account is: " << balance << endl;

 break;

 case 2: cout << "Enter sum of the money you wish to deposite: ";

 cin >> deposite;

 balance = balance + deposite;

 cout << "you had deposite: " << deposite << endl;

 break;

 case 3: cout << "Enter the sum of money you wish to withdraw: ";

 cin >> withdraw;

 balance = balance - withdraw;

 cout << "you had withdraw: "<< withdraw <<endl;

 break;

 default: cout << "You have entered in a wrong input" << endl;

 }

 cout << "Enter choice: ";

 cin >> input;

 }

 return 0;

}

6)

Pseudocode

1.Start

2.Read the day, set total =0

3. If day =1,

 Cost = total +100

 If day > 1 & day < 5

 Cost = total + 70

 If day > 5

 Cost = total + 50

4. Display cost

5.End

#include <iostream>

using namespace std;

int main() {

 int days=1,count;

 while(days!=0){

 int cost=0;

 cout<<"Enter the numbver of days:";

 cin>>days;

 count=days;

 while(days!=0){

 if(days==1){

 cost=cost+100;

 }

 if(days<5&&days>1){

 cost=cost+70;

 }

 else if(days>4){

 cost=cost+50;

 }

days--;

 }

 days=count;

 cout<<cost<<endl;}

 return 0;

}

7)

Pseudocode

1.Start

2. Read amount of unleaded fuel or diesel fuel

3.If it is unleaded fuel

 Totalprice = 2.7 \* amount

 If it is diesel fuel

 Totalprice = 2.58 \* amount

If 9999 program end

4. Display the total cost

5. End

#include <iostream>

using namespace std;

int main ()

{

 int input;

 float amount, price;

 cout << "Nice to meet you Sir/Madam"

 << "\nWelcome to the PetrolUpHere station "

 << "\nWould you like to fill unleaded or diesel fuel?"

 << "\n1. Unleaded fuel"

 << "\n2. Diesel fuel"

 << "\n9999. Thanks for choosing PetrolUpHere station"

 << "\nPlease enter your choice: ";

 cin >> input;

 while (input != 9999)

 {

 switch (input)

 {

 case 1: cout << "Please enter the amount of unleaded fuel you wish to fill: ";

 cin >> amount;

 price = amount \* 2.70;

 cout << "\nThe total amount of unleaded fuel you wish to fill is: "<<amount << " gallon";

 cout << "\nThe total price of the fuel is:RM "<< price;

 break;

 case 2:cout << "Please enter the amount of the diesel fuel you wish to fill: ";

 cin >> amount;

 price = amount \*2.58;

 cout << "\nThe total amount of the diesel fuel you wish to fll is: "<<amount << " gallon";

 cout << "\nThe total price of the fuel is:RM "<<price;

 break;

 default : cout << "The choice you enter is invalid, please reenter your choice";

 }

 cout << "\nEnter choice: ";

 cin >> input;

 }

 return 0;

}

8)

Pseudocode

1. Start

2. Read the word

3. Calculate the number of word

4. Display the number

5. End

#include <iostream>

using namespace std;

int main ()

{

 char str [50];

 int count = 0, i;

 cout << "Enter your text: ";

 gets (str);

 for (i=0; str[i] != 0; i++)

 {

 if (str[i] == ' ')

 count++;

 }

 cout << "Number of words int the paragarph are: "<< count+1;

 return 0;

}

9)

#include <iostream>

using namespace std;

int main ()

{

 double celsius, fahrenheit;

 cout << "Enter the temperature in Celsius: ";

 cin >> celsius;

 fahrenheit = (9\*celsius) / 5 +32;

 cout << "The temperature in celsius is: " << celsius;

 cout << "\nThe temperature in fahrenheit is: " << fahrenheit;

 return 0;

}

10)

#include <iostream>

using namespace std;

int main ()

{

 int totalprofit=0;

 int noofitem,itemid,units;

 double sellprice,costprice,profit;

 cout << "enter the number of item: ";

 cin >> noofitem;

 while (noofitem!=0)

 {

 cout << "\nenter the item id: ";

 cin >> itemid;

 cout << "enter the sell price: RM ";

 cin >> sellprice;

 cout << "enter the cost price: RM ";

 cin >> costprice;

 cout << "enter the units: ";

 cin >> units;

 profit = (sellprice\*units)-(costprice\*units);

 totalprofit = totalprofit + profit;

 cout << "\nthe item id = " << itemid<<endl;

 cout << "the profit = RM " << profit<<endl;

 noofitem -- ;

 }

 cout << "\nthe total profit = RM " << totalprofit;

 }

11)

#include <iostream>

using namespace std;

int main()

{

 int i=5;

 int j=5;

 int n=5;

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

 {

 for(j = 1; j <= i; j++)

 {

 cout << "\* ";

 }

 cout << "\n";

 }

 return 0;

}

12)

#include <iostream>

using namespace std;

int main() {

 int l=5,w=6;

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

 if(i==1||i==l){

 for(int x=0;x<w;x++){

 cout<<"\*";

 }

 cout<<endl;

 }

 if( i>1 && i<l){

 for(int x=1;x<=w;x++){

 if(x==1){

 cout<<"\*";}

 else if(x==w){

 cout<<"\*"<<endl;

 }

 else

 cout<<" ";

 }

 }

 }

 return 0;

 }

13) #include<iostream>

using namespace std;

int main()

{

 int z=1;

 for (int i=0; i<7; i++)

 {

 for (int j=7; j>i; j--)

 {

 cout<<" ";

 }

 cout<<"\*";

 if (i!=0)

 {

 for (int k=1; k<=z; k++)

 {

 cout<<" ";

 }

 cout<<"\*";

 z+=2;

 }

 cout<<endl;

 }

 for (int i=0; i<=z+1; i++)

 {

 cout<<"\*";

 }

return 0;

}

14) #include <iostream>

using namespace std;

int main() {

 int l=7,w=10;

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

 if(i==1||i==l){

 for(int x=0;x<w;x++){

 cout<<"\*";

 }

 cout<<endl;

 }

 if( i>1 && i!=3 && i!=5 && i!=4 && i<l){

 for(int x=1;x<=w;x++){

 if(x==1){

 cout<<"\*";}

 else if(x==w){

 cout<<"\*"<<endl;

 }

 else

 cout<<" ";

 }

 }

 if(i==3 || i==5 ){

 cout<<"\*"<<" ";

 for(int d=0;d<4;d++){

 cout<<"\*";

 }

 cout<<" \*"<<endl;

 }

 if(i==4){

 cout<<"\* \* \* \*"<<endl;

 }

 }

 return 0;

 }

15)

Pseudocode

1. Start

2. Read the Id, worker name, hourly pay rate, number of hours worked

3. Calculate gross pay = hourly pay rate \* number of hours worked

 If gross pay > 2000

 Tax = gross pay \* 0.05

 Net pay = gross pay - tax

4. Display worker id, worker name, gross pay, tax and net pay

5. The sum of total gross pay and total tax deduction.

6.End

#include <iostream>

using namespace std;

int main() {

 double gross[9999],

 tax[9999],

 net[9999],

 rate[9999],sum,sum1,

 hour[9999];

 string name[9999];

 int id[9999],count=0;

for(int i=0;i>-2;i++){

 cout<<"Enter the id"<<endl;

 cin>>id[i];

 cout<<endl;

 if(id[i]==-1){

 i=-4;

 continue;}

 else{

 cout<<"Enter the name"<<endl;

 cin>>name[i];

 cout<<endl;

 cout<<"Enter the hourly pay rate"<<endl;

 cin>>rate[i];

 cout<<endl;

 cout<<"Enter the number of hour work"<<endl;

 cin>>hour[i];

 cout<<endl;

 count=count+1;}}

for(int w=0;w<=count-1;w++){

 gross[w]=rate[w]\*hour[w];

 if(gross[w]>2000){

 tax[w]=gross[w]\*0.05;}

 else

 tax[w]=0;

 sum=sum+gross[w];

 sum1=sum1+tax[w];

 net[w]=gross[w]-tax[w];

 }

for(int y=0;y<=count-1;y++){

 cout<<"Id:"<<id[y]<<endl;

 cout<<"Nmae:"<<name[y]<<endl;

 cout<<"Gross pay:"<<gross[y]<<endl;

 cout<<"Tax deduction"<<tax[y]<<endl;

 cout<<"Netpay:"<<net[y]<<endl<<endl<<endl;}

 cout<<"Total gross pay:"<<sum<<endl;

 cout<<"Total tax deduction:"<<sum1<<endl;

 return 0 ;

 }

16)

#include <iostream>

#include <iomanip>

using namespace std;

int main(){

 cout<<"Enter the year"<<endl;

 int year;

 cin>>year;

 int q=year;

if(year==2000 ||(year-2000)%4==0){

for(int x=1;x<=12;x++){

 int count=0;int month=x;year=q;

 if(x==1){

 cout<<"January"<<endl;

 }

 if(x==2){

 cout<<"February"<<endl;

 }

 if(x==3){

 cout<<"March"<<endl;

 }

 if(x==4){

 cout<<"April"<<endl;

 }

 if(x==5){

 cout<<"May"<<endl;

 }

 if(x==6){

 cout<<"June"<<endl;

 }

 if(x==7){

 cout<<"July"<<endl;

 }

 if(x==8){

 cout<<"August"<<endl;

 }

 if(x==9){

 cout<<"September"<<endl;

 }

 if(x==10){

 cout<<"Oktober"<<endl;

 }

 if(x==11){

 cout<<"November"<<endl;

 }

 if(x==12){

 cout<<"December"<<endl;

 }

 if(x==1||x==3||x==5||x==7||x==8||x==10||x==12){

 for(int i=1;i<=31;i++){

 if (month<3){

 month+=12;year--;

 }

 int result=i+(13\*month-27)/5+year+year/4-year/100+year/400;

 result+=6;

 int dayofweek=(result%7)+1;

 if(count==0){

 int n=(dayofweek-1)\*3;

 cout<<setw(n)<<"";

 count++;

 }

 if(dayofweek==1){

 cout<<setw(3)<<i;

 }

 if(dayofweek==2){

 cout<<setw(3)<<i;

 }

 if(dayofweek==3){

 cout<<setw(3)<<i;

 }

 if(dayofweek==4){

 cout<<setw(3)<<i;

 }

 if(dayofweek==5){

 cout<<setw(3)<<i;

 }

 if(dayofweek==6){

 cout<<setw(3)<<i;

 }

 if(dayofweek==7){

 cout<<setw(3)<<i<<endl;

 }

 if(i==31){

 cout<<endl<<endl;

 break;

 }

}

 }

 else if(x==2){

 for(int i=1;i<=29;i++){

 if (month<3){

 month+=12;year--;

 }

 int result=i+(13\*month-27)/5+year+year/4-year/100+year/400;

 result+=6;

 int dayofweek=(result%7)+1;

 if(count==0){

 int n=(dayofweek-1)\*3;

 cout<<setw(n)<<"";

 count++;

 }

 if(dayofweek==1){

 cout<<setw(3)<<i;

 }

 if(dayofweek==2){

 cout<<setw(3)<<i;

 }

 if(dayofweek==3){

 cout<<setw(3)<<i;

 }

 if(dayofweek==4){

 cout<<setw(3)<<i;

 }

 if(dayofweek==5){

 cout<<setw(3)<<i;

 }

 if(dayofweek==6){

 cout<<setw(3)<<i;

 }

 if(dayofweek==7){

 cout<<setw(3)<<i<<endl;

 }

 if(i==29){

 cout<<endl<<endl;

 break;

 }

 }

}

else if(x==4||x==6||x==11||x==9){

 for(int i=1;i<=30;i++){

 if (month<3){

 month+=12;year--;

 }

 int result=i+(13\*month-27)/5+year+year/4-year/100+year/400;

 result+=6;

 int dayofweek=(result%7)+1;

 if(count==0){

 int n=(dayofweek-1)\*3;

 cout<<setw(n)<<"";

 count++;

 }

 if(dayofweek==1){

 cout<<setw(3)<<i;

 }

 if(dayofweek==2){

 cout<<setw(3)<<i;

 }

 if(dayofweek==3){

 cout<<setw(3)<<i;

 }

 if(dayofweek==4){

 cout<<setw(3)<<i;

 }

 if(dayofweek==5){

 cout<<setw(3)<<i;

 }

 if(dayofweek==6){

 cout<<setw(3)<<i;

 }

 if(dayofweek==7){

 cout<<setw(3)<<i<<endl;

 }

 if(i==30){

 cout<<endl<<endl;

 break;

 }

}

}

}

}

else{

 for(int x=1;x<=12;x++){

 int count=0;int month=x;year=q;

 if(x==1){

 cout<<"January"<<endl;

 }

 if(x==2){

 cout<<"February"<<endl;

 }

 if(x==3){

 cout<<"March"<<endl;

 }

 if(x==4){

 cout<<"April"<<endl;

 }

 if(x==5){

 cout<<"May"<<endl;

 }

 if(x==6){

 cout<<"June"<<endl;

 }

 if(x==7){

 cout<<"July"<<endl;

 }

 if(x==8){

 cout<<"August"<<endl;

 }

 if(x==9){

 cout<<"September"<<endl;

 }

 if(x==10){

 cout<<"Oktober"<<endl;

 }

 if(x==11){

 cout<<"November"<<endl;

 }

 if(x==12){

 cout<<"December"<<endl;

 }

 if(x==1||x==3||x==5||x==7||x==8||x==10||x==12){

 for(int i=1;i<=31;i++){

 if (month<3){

 month+=12;year--;

 }

 int result=i+(13\*month-27)/5+year+year/4-year/100+year/400;

 result+=6;

 int dayofweek=(result%7)+1;

 if(count==0){

 int n=(dayofweek-1)\*3;

 cout<<setw(n)<<"";

 count++;

 }

 if(dayofweek==1){

 cout<<setw(3)<<i;

 }

 if(dayofweek==2){

 cout<<setw(3)<<i;

 }

 if(dayofweek==3){

 cout<<setw(3)<<i;

 }

 if(dayofweek==4){

 cout<<setw(3)<<i;

 }

 if(dayofweek==5){

 cout<<setw(3)<<i;

 }

 if(dayofweek==6){

 cout<<setw(3)<<i;

 }

 if(dayofweek==7){

 cout<<setw(3)<<i<<endl;

 }

 if(i==31){

 cout<<endl<<endl;

 break;

 }

}

 }

 else if(x==2){

 for(int i=1;i<=28;i++){

 if (month<3){

 month+=12;year--;

 }

 int result=i+(13\*month-27)/5+year+year/4-year/100+year/400;

 result+=6;

 int dayofweek=(result%7)+1;

 if(count==0){

 int n=(dayofweek-1)\*3;

 cout<<setw(n)<<"";

 count++;

 }

 if(dayofweek==1){

 cout<<setw(3)<<i;

 }

 if(dayofweek==2){

 cout<<setw(3)<<i;

 }

 if(dayofweek==3){

 cout<<setw(3)<<i;

 }

 if(dayofweek==4){

 cout<<setw(3)<<i;

 }

 if(dayofweek==5){

 cout<<setw(3)<<i;

 }

 if(dayofweek==6){

 cout<<setw(3)<<i;

 }

 if(dayofweek==7){

 cout<<setw(3)<<i<<endl;

 }

 if(i==28){

 cout<<endl<<endl;

 break;

 }

 }

}

else if(x==4||x==6||x==11||x==9){

 for(int i=1;i<=30;i++){

 if (month<3){

 month+=12;year--;

 }

 int result=i+(13\*month-27)/5+year+year/4-year/100+year/400;

 result+=6;

 int dayofweek=(result%7)+1;

 if(count==0){

 int n=(dayofweek-1)\*3;

 cout<<setw(n)<<"";

 count++;

 }

 if(dayofweek==1){

 cout<<setw(3)<<i;

 }

 if(dayofweek==2){

 cout<<setw(3)<<i;

 }

 if(dayofweek==3){

 cout<<setw(3)<<i;

 }

 if(dayofweek==4){

 cout<<setw(3)<<i;

 }

 if(dayofweek==5){

 cout<<setw(3)<<i;

 }

 if(dayofweek==6){

 cout<<setw(3)<<i;

 }

 if(dayofweek==7){

 cout<<setw(3)<<i<<endl;

 }

 if(i==30){

 cout<<endl<<endl;

 break;

 }

}

}

}

}

}