TOPIC: ASSIGNMENT (LAB 03 , EXERCISE 04)

Group member

JEGGEAN (A19EC0059) (QUESTION 11-15)

RAGU (A190152) (QUESTION 7-10)

CHIA WEI HONG (A19EC0033) (QUESTION 1-6)

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;

}

}

}

}

}

}