R.M. Pasindu Prabhath Rathnayake

IM/2019/069

Homework 5

1)

```
#include <iostream>
using namespace std;

int integerPower(int base, int exponent);

int main()
{
    int base, exponent;

    cout<<"Input the value for base : "<<endl;
    cin>>base;

    cout<<"Input the value for exponent : "<<endl;
    cin>>exponent;

    while(exponent <= 0)
    {
        cout<<"Wrong value, input non zero positive integer again : ";
        cin>>exponent;
    }

    integerPower(base,exponent);
}

int integerPower(int x, int y)
{
    int i, value = 1;

    while(i < y)
    {
        value = value * x;
        i++;
    }
    cout<<x<<" ^ "<<y<< " : "<<value;
}
```

2)

```
#include<iostream>
using namespace std;

int timedif(int timeS[])
{
    int secs = 0;
    secs = timeS[0]-timeS[1];

    if(secs <= 0)
    {
        secs = secs * -1;
    }
    cout<<secs;
}

int main()
{
    int hours, minutes, seconds,i=0,time,j = 1;
    int timeS[2];

    while(i<2)
    {
        cout<<"Enter the hours for time "<<j<<":";
        cin>>hours;

        while(hours > 12 || hours < 0)
        {
            cout<<"Enter the correct number of hours : ";
            cin>>hours;
        }

        cout<<"Enter the minutes for time "<<j<<":";
        cin>>minutes;

        while(minutes > 60 || minutes < 0)
        {
            cout<<"Enter the correct number of minutes : ";
            cin>>minutes;
        }

        cout<<"Enter the seconds for time "<<j<<":";
        cin>>seconds;
```

```
        while(seconds > 60 || seconds < 0)
        {
            cout<<"Enter the correct number of seconds : ";
            cin>>seconds;
        }

        time = (hours*60*60 + minutes*60 + seconds);
        timeS[i] = time;
        i++;
        j++;

        timedif(timeS);

    }
}
```

3)

```
#include<iostream>
#include<math.h>

using namespace std;

int distance(double xpoint[], double ypoint[])
{
    double distance = 0;

    distance = sqrt(pow((xpoint[1]-xpoint[2]),2) + pow((ypoint[1]-ypoint[2]),2));
    cout<<"distance is : "<<distance;
}

int main()
{
    double xpoint[2];
    double ypoint[2];
    int i = 1,j = 0;

    while(i<3)
    {
        cout<<"Enter the x"<<i<<" : ";
        cin>>xpoint[j];

        cout<<"Enter the y"<<i<<" : ";
```

```
        cin>>ypoint[j];
        i++;
        j++;//to acces array
    }

    distance(xpoint,ypoint);
}
```

4)

```
#include<iostream>

using namespace std;

int fibonacci(int n)
{
    if((n==1)||(n==0))
    {
        return(n);
    }
    else
    {
        return(fibonacci(n-1)+fibonacci(n-2));
    }
}

int main()
{
    int n,i=0;
    cout<<"Input the number of terms for Fibonacci Series:";
    cin>>n;
    cout<<"\nFibonacci Series is as follows\n";

    while(i<n)
    {
        cout<<" "<<fibonacci(i);
        i++;
    }

    return 0;
}
```