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// CIS 9310
// Assignment 2
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#include <iostream>
using namespace std;
```

```
double power(double b, int e){
    int count = 1;
    double result = b;
    bool e_neg=false;

    if (e<0){
        e_neg=true;
        e=e*-1;
    }

    if (e==0){
        return 1;
    }else{
        while(count!=e){
            result = result*b;
            count++;
        }
    }

    if(e_neg){
        return 1/result;
    } else{
        return result;
    }
}
```

```
bool MoreData(){
    char ans;
    bool result;

    do{
        cout << "Would you like to continue(y/n)? ";
        cin >> ans;

        if(ans=='y' || ans=='Y')
            return true;
        else if(ans=='n' || ans=='N')
            return false;
    }while(1);
}
```

```
double Sqrt(double v){
    double old_v = 1, new_v, diff;
```

```

do{
    new_v = 0.5*(old_v + v / old_v);
    diff = new_v-old_v;

    old_v = new_v;
    if(diff<0) {
        diff = diff*-1;
    }
}while(diff>=0.005);

return new_v;
}

int main(){
    int x,y;

    do{
        cout << "Please enter a value for x: ";
        cin >> x;
        cout << "Please enter a value for y: ";
        cin >> y;

        if(x>y){
            int temp;
            temp = x;
            x = y;
            y = temp;
        }

        cout << "N\tN Squared\tSquare Root(N)" << endl;
        for(int i=x; i<=y; i++){
            cout << i << "\t" << power(i,2) << "\t\t" << Sqrt(i) << endl;
        }
    }while(MoreData());

    return 0;
}

```