

```
int count;
```

```
cout << "How many times would you like to play?";
```

```
cin >> count;
```

```
cin.get(c);
```

```
for (int i = 1;
```

int i = 1

```
    i <= count; ++i)
```

add 1

```
// All code that plays  
the game
```



## Problem

You have decided to take on some part time work - maybe painting, gardening, house cleaning, computer repair, etc.

You would like to have a program print an invoice when you are done with a job.

# Algorithm

1. Welcome the user
  - explain the purpose of this program
  - plan what you will say
2. Get the input
  - Prompt for the # hours worked
  - ~~Read~~ Read in the # hours worked
  - Prompt for the pay rate (e.g., 4.50)
  - Read in the pay rate
  - Echo the # hours worked and pay rate  
you entered \_\_\_ hours at \$ \_\_\_ rate

3. Calculate the amount owed

Result = payrate \* number hours worked

4. Display invoice

(in your algorithm plan what the invoice will look like)

5. Termination Message

# The Program!

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

```
/* Name : Jan Miller
```

```
class : cs161
```

```
Program: ~~~~~
```

```
This program prepares an invoice for paper  
for work done.
```

```
*/
```

alg



```

int main ( )
{
    // Define variables
    float pay-rate;           // my rate
    int hours-worked;        // rounded up!
    float amount-owed;       // total

    // Welcome Message
    cout << "Welcome to the Invoice Creator!"
        << endl
        << endl
        << "All you need to do is tell us"
        << " how much you worked !!!"
        << endl;
}

```

```
// Get the input - first prompt
cout << "Please enter the number of hours"
<< " worked : "; (e.g., 2 a whole)
cin >> hours_worked; cin.get();
cout << "Please enter your pay rate : ";
cin >> pay_rate; cin.get();
```

```
// Now Echo!
cout << "You entered "
<< " $ " << pay_rate << " rate, for "
<< hours_worked << " hours"
<< endl;
```

```
// Calculate the amount owed
amount_owed = pay_rate * hours_worked;
```

```
// Output the invoice
```

where  
should  
I put  
this?

```
{
    cout.setf(Cios::fixed, ios::floatfield);
    cout.precision(2);
    cout.setf(Cios::showpoint);
}
```

```
    cout << "Please pay within 30 days ";
    cout << "$ " << amount_owed << endl;
    cout << "Make payable to Tom Miller ";
    cout << endl;
// The end.
cout << "Thank you for using our services";
cout << endl;
4
```



```
ein.get(i); //power  
return  $\phi_j$ ;
```

3

```

do
    // Get the input - first prompt
    cout << "Please enter the number of hours"
    << " worked : "; // (eg. 2 a while)
    cin >> hours_worked; cin.get();
    cout << "Please enter your pay rate : ";
    cin >> pay_rate; cin.get();
    while (hours_worked <= 0.0 // pay_rate <= 0.0)
        // Now Echo!
        cout << "You entered "
        << " $ " << pay_rate << " rate, for "
        << hours_worked << " hours "
        << endl;
}
}

```

```

int main ( )
{
    // Define variables
    float pay-rate;           // my rate
    int hours-worked;        // rounded up!
    float amount-owed;       // total

    // Welcome Message
    cout << " Welcome to the Invoice Creator!"
    << endl
    << endl
    << " All you need to do is tell us "
    << " how much you worked !!! "
    << endl;
}

```

```

do
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    // Get the input - first prompt
    cout << "Please enter the number of hours"
    << " worked : "; (e.g., 2 a whole)
    cin >> hours_worked; cin.get();
    cout << "Please enter your pay rate : ";
    cin >> pay_rate; cin.get();
    while (hours_worked <= 0.0 || pay_rate <= 0.0)
    // Now Echo!
        cout << "You entered "
        << " $ " << pay_rate << " rate, for "
        << hours_worked << " hours"
        << endl;
    }
}

```

```
// Calculate the amount owed
amount_owed = pay_rate * hours_worked;
```

```
// Output the invoice
```

where  
should  
I put  
this?

```
{
    cout.setf(ios::fixed, ios::floatfield);
    cout.precision(2);
    cout.setf(ios::showpoint);
}
```

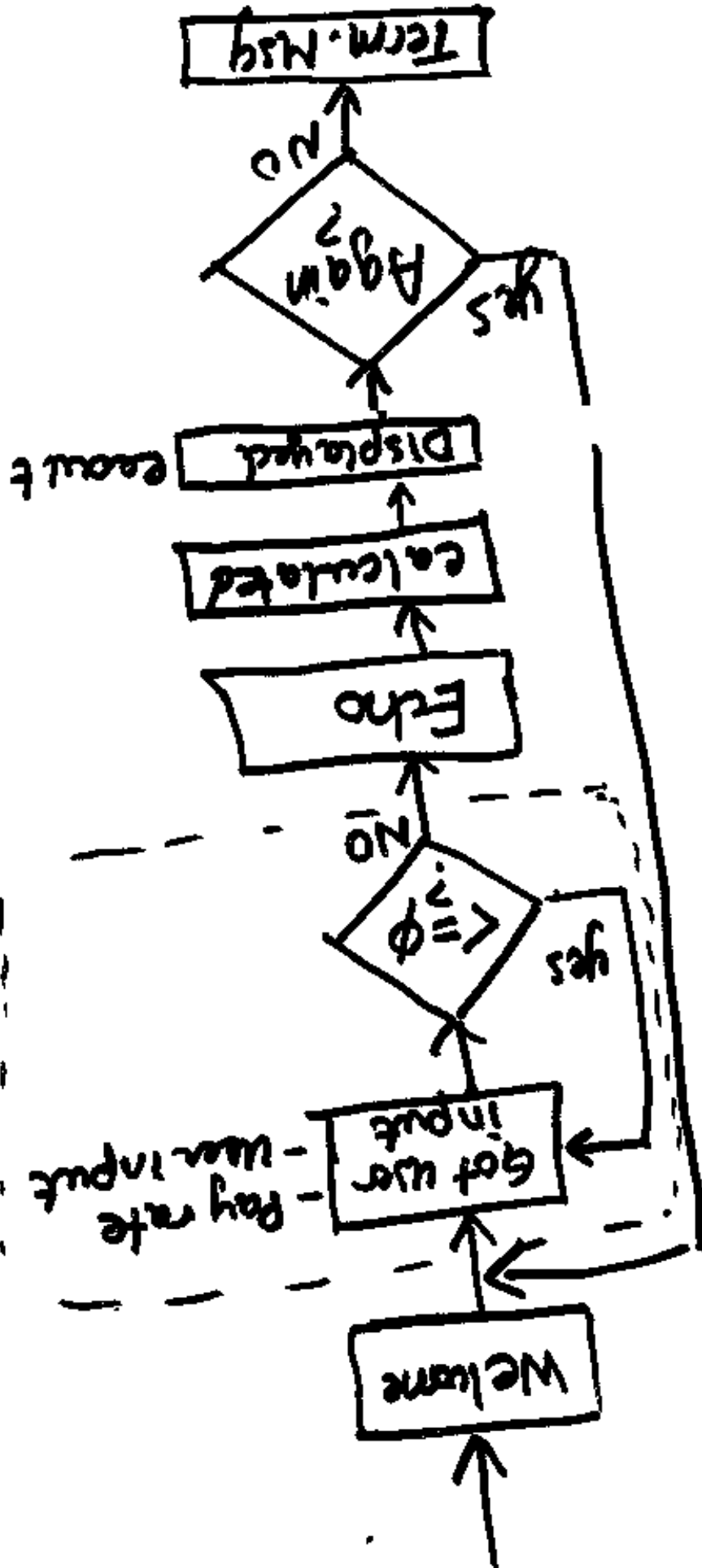
```
cout << "Please pay within 30 days ";
cout << "$ " << amount_owed << endl;
cout << "Make payable to Tom Miller ";
cout << endl;
// The end!
cout << "Thank you for using our services.";
cout << endl;
```

A

4

(A)

```
grandtotal += amount_owed;
cout << "More work? ";
cin >> response; cin.get();
} while (response == 'y' || response == 'Y');
cout << "You made in total today ";
<< "$ " << grandtotal << endl;
//end.....
```



Function

in welcome ( ... ) ;

do  
 input ( ... ) ;  
 echo ( ... ) ;  
 calculate ( ... ) ;  
 Display ( ... ) ;  
 while ( Again ( ... ) ) ;  
 Ending ( ... ) ;

#include <iostream>  
using namespace std;

prototypes

```
void welcome ();  
return type      name      argument list  
bool Again ();
```

```
int main ()      int global  
{  
    welcome ();      // call the welcome  
                        function
```

```
    do  
        Program  
    } while ( Again );
```

}  
← PUT MY FUNCTIONS HERE



```
void welcome ( )
```

```
{  
  //Variables
```

```
  int staff;
```

```
  // Statements
```

```
  cout << "welcome.....";
```

```
  << ".....";
```

```
  << ".....";
```

```
  << endl;
```

```
}  
←
```

bool Again()

{ char response;

(y/n) ? " "

{ do cout << "Do you... want again: ";

cin >> response;

cin.get();

response = toupper(response);

} while (response != 'Y' &&

response != 'N');

if ( response == 'Y' )

return true; 1

return false; 0

}