

```
// Tan Ying Yao 17UEB03648 Monday
```

```
#include<iostream>
```

```
#include<iomanip>
```

```
using namespace std;
```

```
//function prototypes
```

```
void getdata(double *total, double *gst_rate);
```

```
double calculate_gst_component(double total, double gst_rate);
```

```
double calculate_value(double total, double gst_component);
```

```
void print_results(double total, double gst_rate, double gst_component, double value);
```

```
int main(void)
```

```
{
```

```
    // listing down all the variable used
```

```
    double total, gst_rate, value, gst_component;
```

```
    // calling getdata to obtain input amount and gst rate
```

```
    getdata(&total, &gst_rate);
```

```
    //calling gst_component to get the GST component
```

```
    gst_component = calculate_gst_component(total, gst_rate);
```

```
    //calling value to get the value of goods
```

```
    value = calculate_value(total, gst_component);
```

```
    //calling print_result to print the result
```

```
    print_results(total, gst_rate, value, gst_component);
```

```
    return 0;
```

```
}
```

```
//function definitions
```

```
void getdata(double* total, double* gst_rate)
```

```
{  
    cout << "Total amount (inc GST): $ ";  
    cin >> *total;  
    cout << "GST Rate (in the format 0.06 (for 6%): ";  
    cin >> *gst_rate;  
  
}
```

```
double calculate_gst_component(double x, double y)
```

```
{  
    double total, gst_rate;  
    return x / (100 + 0.06 * 100) * 0.06 * 100;  
}
```

```
double calculate_value(double a, double b)
```

```
{  
    return a - b;  
}
```

```
void print_results(double total, double gst_rate, double value, double gst_component)
```

```
{  
    cout << endl;  
    cout << "- - Receipt - - \n" << endl;  
    cout << "Total amount (inc GST) : $ " << fixed << setprecision(2) << setw(10) << total << endl;  
    cout << "GST Rate          : " << fixed << setprecision(2) << gst_rate * 100 << "%" << endl;  
    cout << "Value of goods (ex GST): $ " << fixed << setprecision(2) << setw(10) << value << endl;  
    cout << "GST component        : $ " << fixed << setprecision(2) << setw(10) << gst_component <<  
endl;  
  
}
```

Total amount (inc GST): \$ 1200
GST Rate (in the format 0.06 (for 6%): 0.06

- - Receipt - -

Total amount (inc GST) : \$ 1200.00
GST Rate : 6.00%
Value of goods (ex GST): \$ 1132.08
GST component : \$ 67.92
Press any key to continue . . .