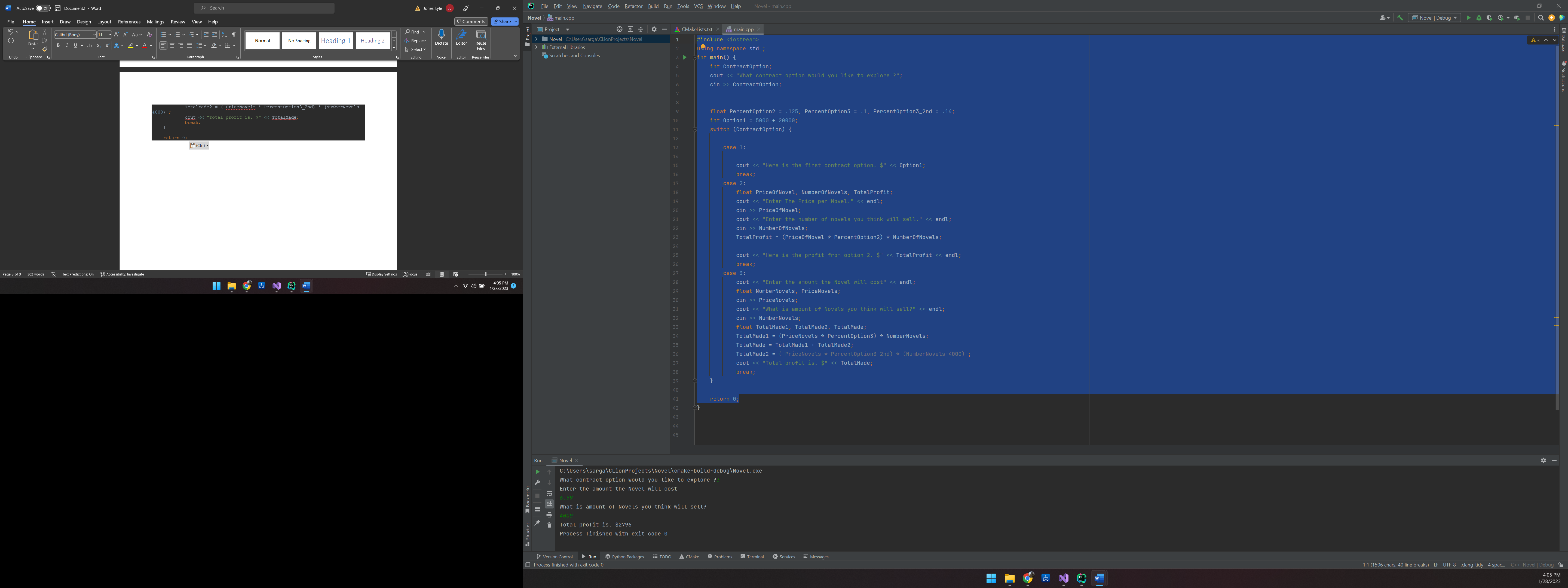
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| --- | --- | --- |
| Parking Fee | | |
| Input | Process | Output |
| 1. Have them in put hours | 1. Have the hours sorted by the amount of time. 2. Use formula to come up with the fee. 3. F=Parkedtime \* ( hours +1) | The amount you owe for parking will show up as an int. |

Graphical user interface, application

Description automatically generated

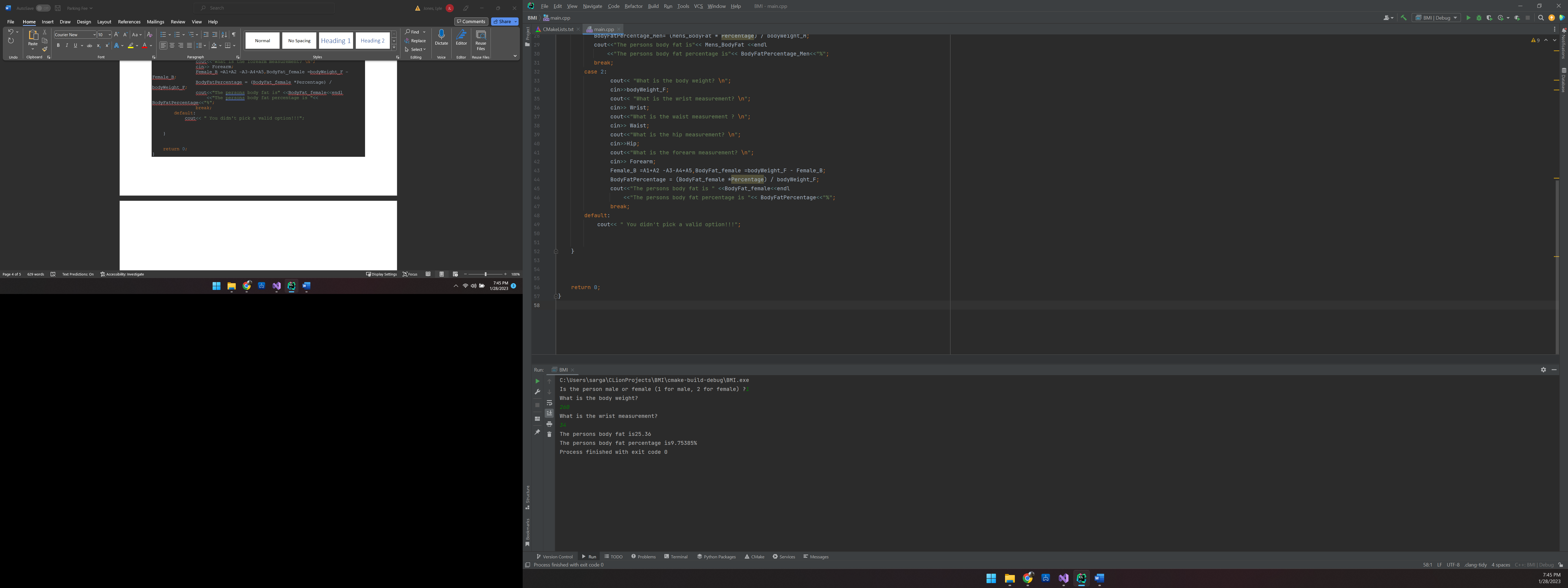
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| --- | --- | --- |
| Novel | | |
| Input | Process | Output |
| 1. Need to input which option you want 2. Need to know the number of books sold 3. Need to know the price | 1. Select option. 2. Add 5000+20000 3. Have the price of book \* the percentage. 4. Multiply that number by number of books sold 5. Any thing over 4000 \* other percentage | The amount the author will make for the books |

#include <iostream>  
using namespace std ;  
int main() {  
 int ContractOption ;  
 cout << "What contract option would you like to explore ?";  
 cin >> ContractOption;  
 float PercentOption2 = .125, PercentOption3 = .1, PercentOption3\_2nd = .14;  
 int Option1 = 5000 + 20000;  
 switch (ContractOption ) {  
  
 case 1:  
  
 cout << "Here is the first contract option. $" << Option1;  
 break;  
 case 2:  
 float PriceOfNovel, NumberOfNovels, TotalProfit;  
 cout << "Enter The Price per Novel." << endl;  
 cin >> PriceOfNovel;  
 cout << "Enter the number of novels you think will sell." << endl;  
 cin >> NumberOfNovels;  
 TotalProfit = (PriceOfNovel \* PercentOption2) \* NumberOfNovels;  
  
 cout << "Here is the profit from option 2. $" << TotalProfit << endl;  
 break;  
 case 3:  
 cout << "Enter the amount the Novel will cost" << endl;  
 float NumberNovels, PriceNovels;  
 cin >> PriceNovels;  
 cout << "What is amount of Novels you think will sell?" << endl;  
 cin >> NumberNovels;  
 float TotalMade1, TotalMade2, TotalMade;  
 TotalMade1 = (PriceNovels \* PercentOption3) \* NumberNovels;  
 TotalMade = TotalMade1 + TotalMade2;  
 TotalMade2 = (PriceNovels \* PercentOption3\_2nd) \* (NumberNovels - 4000);  
 cout << "Total profit is. $" << TotalMade;  
 break;  
  
 default:  
 cout<<"Is not an option ";  
  
 }  
  
 return 0;  
}

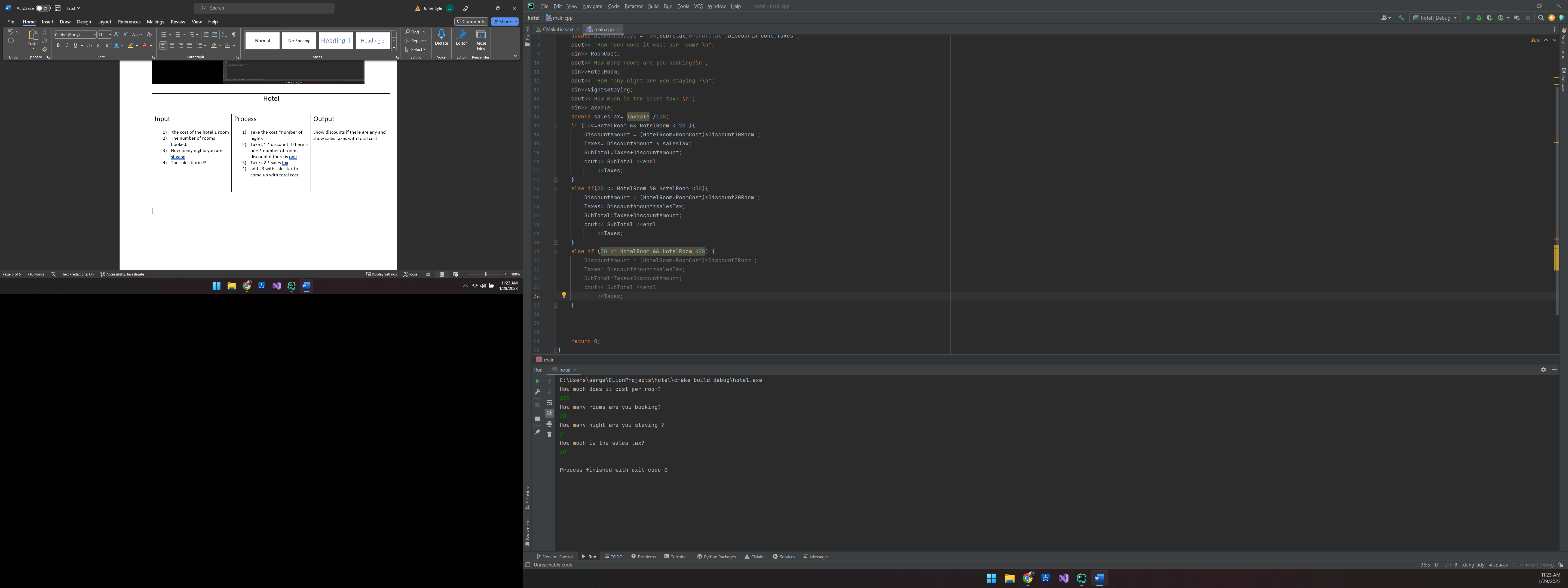


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| --- | --- | --- |
| BMI | | |
| Input | Process | Output |
| 1. Need to know if female or male 2. Need to know body weight, wrist measurement, waist measurement , hip measurement, and forearm measurement. | 1. Take inform form male or female and calculate body fat and body fat percentage | Show the BMI whether its male or female |

#include <iostream>  
#include <string>  
using namespace std;  
  
int main() {  
 float bodyWeight\_F , Wrist , Waist, Hip , Forearm,bodyWeight\_M ;  
 float W\_Number1= .732 , W\_Number2 = 8.987 , W\_Number3 =3.14 , W\_Number4 = .157 , W\_Number5 =.249 , W\_Number6 = .434; // numbers for calculating female BMI  
 float A1= (bodyWeight\_F \* W\_Number1)+ W\_Number2 , A2= Wrist/W\_Number3 , A3 = Waist \* W\_Number4, A4 =Hip\* W\_Number5 ,A5 = Forearm \* W\_Number6 ;  
 float Female\_B =A1+A2 -A3-A4+A5 , BodyFat\_female =bodyWeight\_F - Female\_B ;  
 float BodyFatPercentage = (BodyFat\_female \*100) / bodyWeight\_F;  
 float M\_Number1 = 1.082 , M\_Number2 = 94.42 , M\_Number3 = 4.15 ;  
 int Percentage= 100;  
 int Identity ;  
 cout<< "Is the person male or female (1 for male, 2 for female) ?";  
 cin>> Identity ;  
  
 switch ( Identity ) {  
 case 1:  
 cout<<"What is the body weight? \n";  
 cin>>bodyWeight\_M;  
 cout<<"What is the wrist measurement? \n";  
 cin>>Wrist;  
 float Mens\_A1,Mens\_B ,Mens\_A2, Mens\_BodyFat, BodyFatPercentage\_Men;  
 Mens\_A2= Wrist \* M\_Number3,  
 Mens\_A1 = (bodyWeight\_M \* M\_Number1)+M\_Number2,  
 Mens\_B=Mens\_A1-Mens\_A2;  
 Mens\_BodyFat = bodyWeight\_M-Mens\_B;  
 BodyFatPercentage\_Men= (Mens\_BodyFat \* Percentage) / bodyWeight\_M;  
 cout<<"The persons body fat is"<< Mens\_BodyFat <<endl  
 <<"The persons body fat percentage is"<< BodyFatPercentage\_Men<<"%";  
 break;  
 case 2:  
 cout<< "What is the body weight? \n";  
 cin>>bodyWeight\_F;  
 cout<< "What is the wrist measurement? \n";  
 cin>> Wrist;  
 cout<<"What is the waist measurement ? \n";  
 cin>> Waist;  
 cout<<"What is the hip measurement? \n";  
 cin>>Hip;  
 cout<<"What is the forearm measurement? \n";  
 cin>> Forearm;  
 Female\_B =A1+A2 -A3-A4+A5,BodyFat\_female =bodyWeight\_F - Female\_B;  
 BodyFatPercentage = (BodyFat\_female \*Percentage) / bodyWeight\_F;  
 cout<<"The persons body fat is" <<BodyFat\_female<<endl  
 <<"The persons body fat percentage is "<< BodyFatPercentage<<"%";  
 break;  
 default:  
 cout<< " You didn't pick a valid option!!!";  
  
  
 }  
  
  
 return 0;  
}



|  |  |  |
| --- | --- | --- |
| Hotel | | |
| Input | Process | Output |
| 1. the cost of the hotel 1 room 2. The number of rooms booked. 3. How many nights you are staying 4. The sales tax in % | 1. Take the cost \*number of nights 2. Take #1 \* discount if there is one \* number of rooms discount if there is one 3. Take #2 \* sales tax 4. add #3 with sales tax to come up with total cost | Show discounts if there are any and show sales taxes with total cost |



#include <iostream>  
using namespace std;  
int main() {  
 int HotelRoom, NightsStaying,TaxSale,RoomCost ;  
 double Discount10Room = .10 , Discount20Room = .20 ;  
 double Discount3Room = .30 ;  
 double Discount3Days = .05,SubTotal,GrandTotal ,DiscountAmount,Taxes ;  
 cout<< "How much does it cost per room? \n";  
 cin>> RoomCost;  
 cout<<"How many rooms are you booking?\n";  
 cin>>HotelRoom;  
 cout<< "How many night are you staying ?\n";  
 cin>>NightsStaying;  
 cout<<"How much is the sales tax? \n";  
 cin>>TaxSale;  
 double salesTax= TaxSale /100;  
 if (10<=HotelRoom && HotelRoom < 20 ){  
 DiscountAmount = (HotelRoom\*RoomCost)\*Discount10Room ;  
 Taxes= DiscountAmount \* salesTax;  
 SubTotal=Taxes+DiscountAmount;  
 cout<< SubTotal <<endl  
 <<Taxes;  
 }  
 else if(20 <= HotelRoom && HotelRoom <30){  
 DiscountAmount = (HotelRoom\*RoomCost)\*Discount20Room ;  
 Taxes= DiscountAmount\*salesTax;  
 SubTotal=Taxes+DiscountAmount;  
 cout<< SubTotal <<endl  
 <<Taxes;  
 }  
 else if (30 <= HotelRoom && HotelRoom <20) {  
 DiscountAmount = (HotelRoom\*RoomCost)\*Discount3Room ;  
 Taxes= DiscountAmount\*salesTax;  
 SubTotal=Taxes+DiscountAmount;  
 cout<< SubTotal <<endl  
 <<Taxes;  
 }  
  
  
  
 return 0;