MINI PROJECT >> "Everything Convertor

REPORT USING LATEX

0.1 Objective of the Project-

This project aims at solving basic conversions used in daily life efficiently and without errors..

0.2 Function Description-

[**F.1**] FaranheitToCelcius - To convert Temprature given in faraheit to celsius

[**F.2**] CelsiusToFaranheit- To convert Temprature given in celsius to faraheit

[**F.3**] DecimalToBinary - To convert decimal numbers to binary form

[**F.4**] BinaryToDecimal -To convert binary numbers to decimal form

[**F.5**] DecimalToHexa - To convert decimal numbers to hexadecimal form

[**F.6**] DecimalToOctal - To convert decimal numbers to octal form.

[**F.7**] metpersecTokmperhour - To convert speed given in meters per second in kilometers per hour.

[**F.8**] kmperhourTometpersec - To convert speed given in km per hours to meter per second.

[**F.9**] CurrencyConversion - To convert indian currency to various other nations currency.

[**F.10**] weightconversion -To convert kilograms in various other weights

[**F.11**] meterTofeet - To convert length given in meters to feet

[**F.12**] feetToinches - To convert length given in feet to inches

0.3 Program Code-

Start /*mini project : everything converter */
include ¡iostream¿ using namespace std;
float FaranheitToCelcius(float faranheit); float CelsiusToFaranheit(float celsius); void DecimalToBinary(int n); int BinaryToDecimal(string n); string DecimalToHexa(int n); void DecimalToOctal(int n); void metpersecTokmperhour(float n); void kmperhourTometpersec(float n); void CurrencyConversion(float n); void weightconversion(float n);
int main() cout¡¡"Welcome to Everything convertor"¡¡endl; cout¡¡"please select options from list to convert "¡¡endl; cout¡¡"1.Temprature convertor"¡¡endl; cout¡¡"2.Number system convertor"¡¡endl; cout¡¡"3.speed convertor"¡¡endl; cout¡¡"4.currency convertor"¡¡endl; cout¡¡"5.weights convertor"¡¡endl; int a; //selected option cin¿¿a; if(a==1)
cout¡¡"select one from the below given conversions"¡¡endl; cout¡¡"1.Faranheit to celsius"¡¡endl; cout¡¡"2.celsius to faranheit"¡¡endl; int b; //second selected option cin¿¿b;
if (b==1) float p; //temporary variable FaranheitToCelcius(p); else if (b==2) float p; //temporary variable CelsiusToFaranheit(p); else cout¡¡"invalid selection sorry "¡¡endl;
else if (a==2) cout¡¡"select one from the below given conversions"¡¡endl; cout¡¡"1.decimal to binary"¡¡endl; cout¡¡"2.binary to decimal"¡¡endl; cout¡¡"3.decimal to hexadecimal"¡¡endl; cout¡¡"4.decimal to octal"¡¡endl; int b; //second selection cin¿¿b; if (b==1) int c; //temporary variable DecimalToBinary(c); else if (b==2) string c; //temporary variable BinaryToDecimal(c); else if (b==3) int c; //temporary variable DecimalToHexa(c); else if (b==4) int c; //temporary variable DecimalToOctal(c); else cout¡¡"invalid selection sorry"¡¡endl;
else if (a==3) cout¡¡"select one from the below given conversions"¡¡endl; cout¡¡"1.kmph to mps"¡¡endl; cout¡¡"2.mps to kmph"¡¡endl; int b; // second selection cin¿¿b; if(b==1) float p; kmperhourTometpersec(p); else if (b==2) float p; metpersecTokmperhour(p);
else cout¡¡"invalid selection sorry"¡¡endl;
else if (a==4) float p; CurrencyConversion(p); else if(a==5) float p; weightconversion(p);
cout¡¡"invalid selection sorry"¡¡endl;
cout¡¡"program ended"¡¡endl; cout ¡¡ "Thankyou" ¡¡ endl;
cout ¡¡ "———————— " ¡¡ endl;

return 0;

/*

1.function to convert faranheit to celsius */ float FaranheitToCelcius(float faranheit) float celsius; cout ¡¡ "Enter the temperature in fahrenheit cin ¿¿ faranheit;

celsius = 5 * (faranheit - 32) / 9; //converting fahreneheit to celsius

cout¡¡"Temp in celsius is : "¡¡celsius¡¡endl;

/* 2. function to convert celsius to faranheit */ float CelsiusToFaranheit(float celsius) float faraheit,celcius; cout ¡¡ "Enter the temperature in celsius cin ¿¿ celcius; faraheit = (celcius * 9.0) / 5.0 + 32; //converting celsius to faranheit cout¡¡"Temp in fahreneheit is : "¡¡faraheit¡¡endl;

/* 3. function to convert decimal numbers to binary numbers */ void DecimalToBinary(int n) cout¡¡"enter the number in decimal "¡¡endl; int arr[11], i = 0;int num; cin¿¿num; n=num; // Until the value of n becomes 0. while(n != 0) arr[i] = n i++; n = n / 2; cout¡¡"binary form of given number is : " ;

// Printing the array in Reversed Order. for(i = i - 1; i ¿= 0;i–) cout ¡¡ arr[i]; cout ¡¡ endl;

/* 4. function to convert binary numbers to decimal form */ int BinaryToDecimal (string n) cout¡¡"enter the number in binary"¡¡endl; cin¿¿n; string /* 5. function to convert decimal to hexadecimal */ string DecimalToHexa(int n) cout¡¡"enter the number in decimal "; cin¿¿n; // answer string to store hexadecimal number string ans = "";

while (n != 0) // remainder variable to store remainder int rem = 0;

// char variable to store each character char ch; // storing remainder in rem variable. rem = n

// check if temp ¡ 10 if (rem ¡ 10) ch = rem + 48; //ascii value of 48 is 0 else ch = rem + 55; //ascii value of 65 is A

// updating the ans string with the character variable ans += ch; n = n / 16;

// reversing the ans string to get the final result int i = 0, j = ans.size() - 1; while(i ¡= j) swap(ans[i], ans[j]); i++; j–; cout¡¡"Hexadecimal form of given number is : "¡¡ans¡¡endl;

/* 6. function to convert decimal to octal */

void DecimalToOctal(int n) cout¡¡"enter the number in decimal "; cin¿¿n; int octalNum = 0, placeValue = 1; int dNo =n; while (n

!= 0) octalNum += (n n /= 8; placeValue *= 10; cout¡¡"Octal form of given number is :"¡¡octalNum¡¡endl;

/* 7. function to conver meters per sec to t to kilometers per hour */

void metpersecTokmperhour(float n) cout¡¡"enter the speed in meter per sec"¡¡endl; cin¿¿n; float ans = n*3.6; cout¡¡"the speed in kilometers per hour is "¡¡ans¡¡endl;

/* 8. function to convert kilometers per hour to meters per second */

void kmperhourTometpersec(float n) cout¡¡"enter the speed in kilometers per hour"¡¡endl; cin¿¿n; float ans = n/3.6; cout¡¡"the speed in meters per sec is "¡¡ans¡¡endl;

/* 9. function to convert currencies */

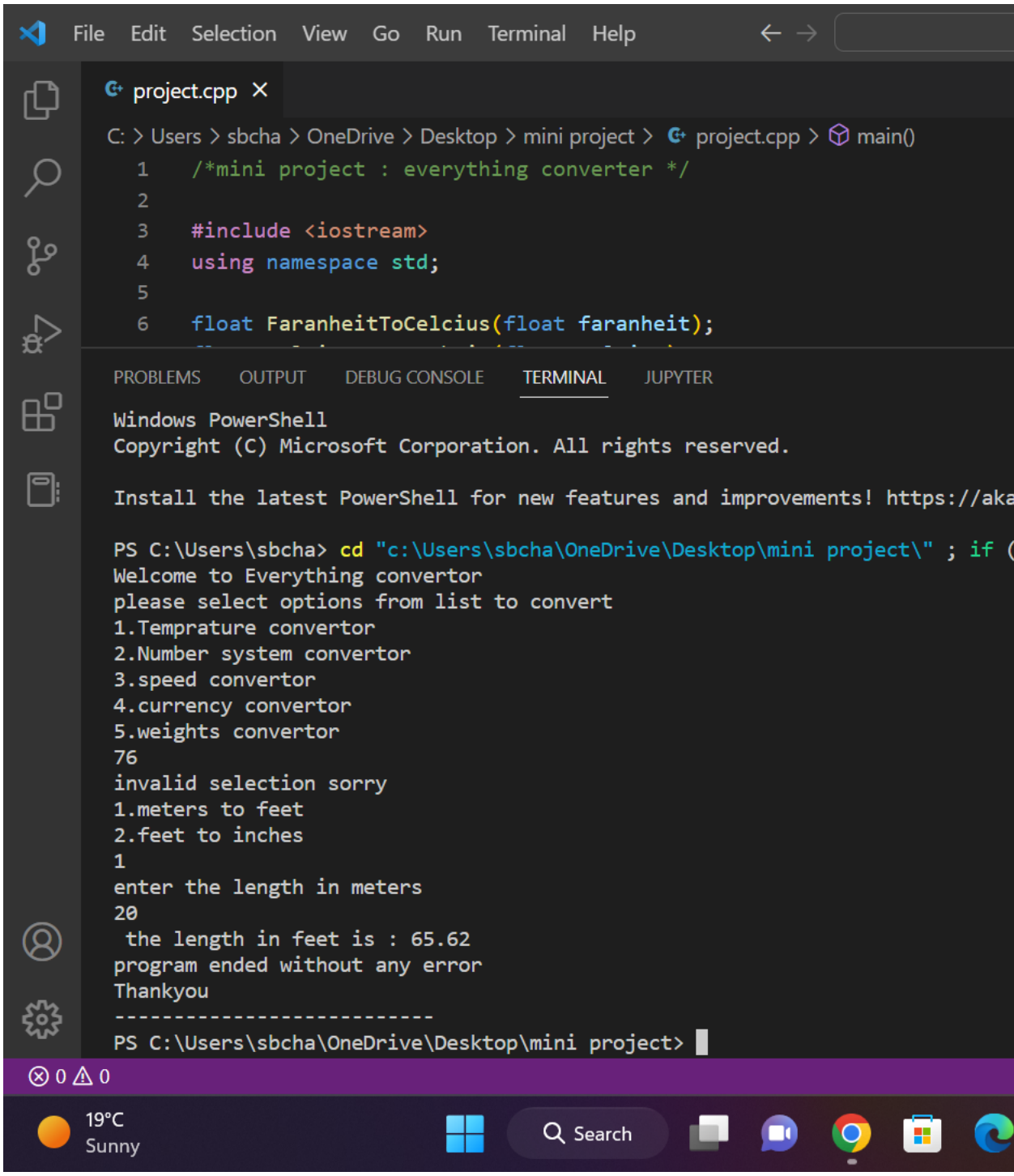
void CurrencyConversion(float n) cout¡¡"enter amount of rupees "; cin¿¿n; float rupees ; float britishPounds = n*0.010 ; float usdollars= n*0.012; float euro = n*0.012 ; float deutschmark = n*0.0232; float yen =n*1.73; cout ¡¡ " US dollars" ¡¡usdollars¡¡ endl ; cout ¡¡ " British Pounds : " ¡¡britishPounds¡¡ endl ; cout ¡¡ " French euro : " ¡¡euro¡¡ endl ; cout ¡¡ " German Deutschmark : " ¡¡deutschmark¡¡ endl ; cout ¡¡ " Japanese Yen : " ¡¡yen¡¡ endl ;

/* 10. function to convert weights */ void weightconversion(float n) cout¡¡"enter amount of weight in kilograms "¡¡endl; cin¿¿n; float kilograms ; float Pounds = n*2.20462 ; float ounces= n*35.274; float grams = n*1000 ;

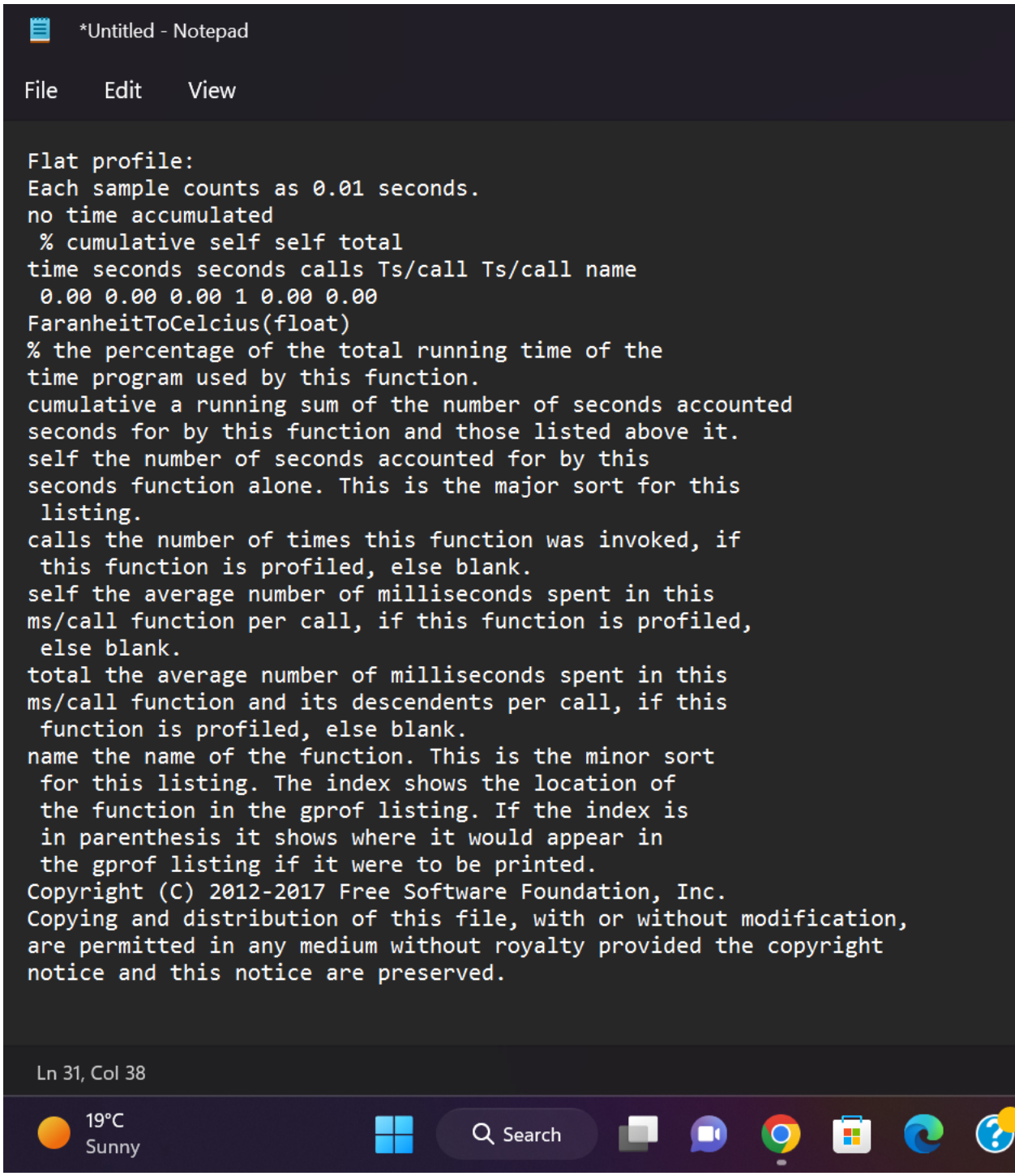
cout ¡¡ " pounds :"¡¡Pounds¡¡ endl ; cout ¡¡ " ounces : " ¡¡ounces¡¡ endl ; cout ¡¡ " grams : " ¡¡grams¡¡ endl ;

end

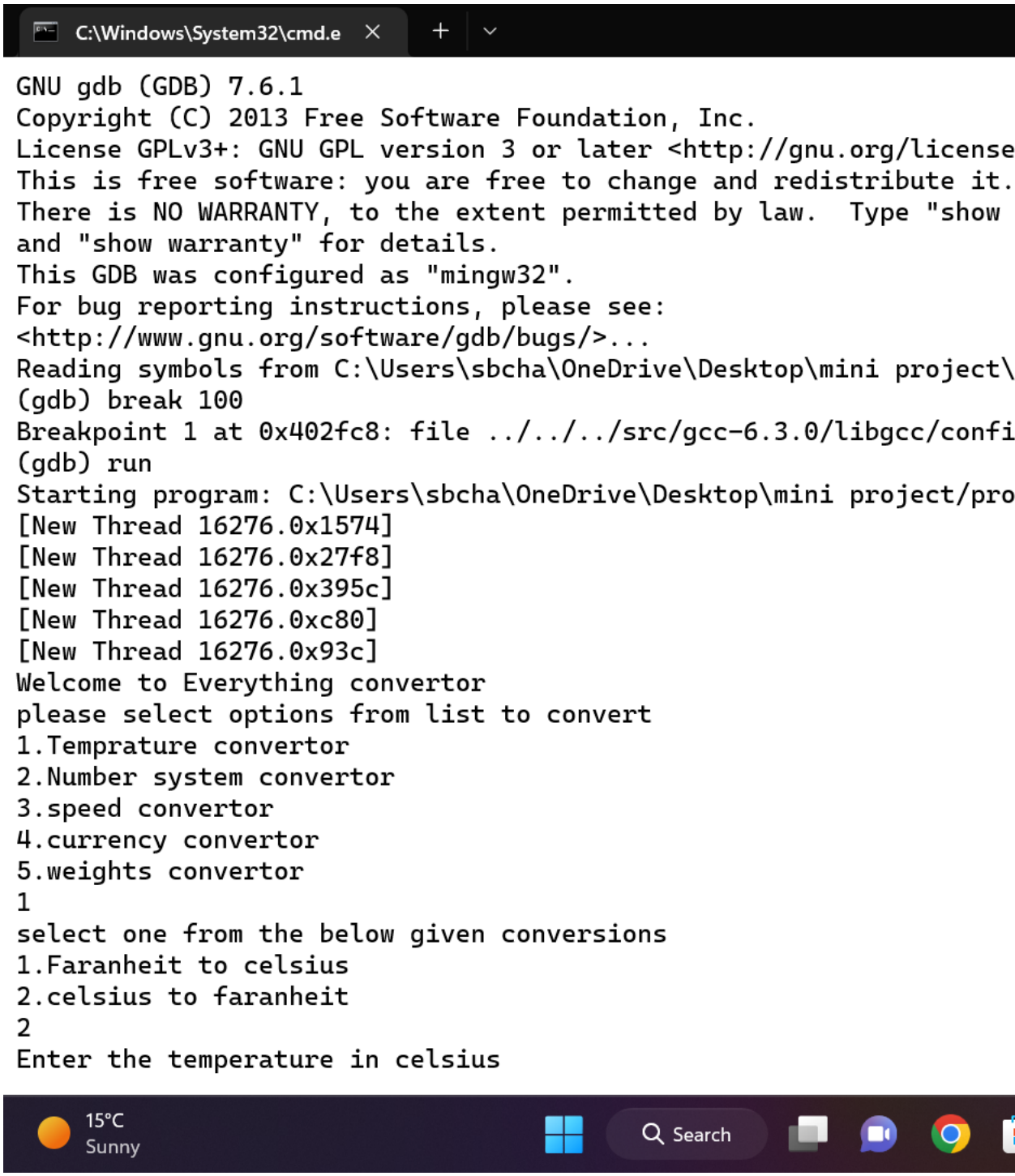
0.4 Output-


File Edit Selection View Go Run Terminal Help
project.cpp
C: > Users > sbcha > OneDrive > Desktop > mini project > project.cpp > main()
1 /*mini project : everything converter */
2
3 #include <iostream>
4 using namespace std;
5
6 float FaranheitToCelcius(float faranheit);
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka
PS C:\Users\sbcha> cd "c:\Users\sbcha\OneDrive\Desktop\mini project\" ; if (
Welcome to Everything convertor
please select options from list to convert
1.Temprature convertor
2.Number system convertor
3.speed convertor
4.currency convertor
5.weights convertor
76
invalid selection sorry
1.meters to feet
2.feet to inches
1
enter the length in meters
20
the length in feet is : 65.62
program ended without any error
Thankyou
PS C:\Users\sbcha\OneDrive\Desktop\mini project>
0 0
19°C
Sunny
Search

0.5 Profiling-



0.6 Debugging-



0.7 Miscellaneous Data-

Starting Date -14/11/22

Starting Day -Monday

Ending Date -18/11/22

Ending Day -Friday

Total Time required - 4 days

Total line of code - approx 400 lines of code

Total number of functions - 12 functions used

Language Used - C++ Language

Profiller used - Gprof

Debugger used - GDB

Project Title - Everything Convertor