PROJECT TITLE-

- ### STUDENT HEALTH TRACKER

LANGUAGE - C

INTRODUCTION:

Health indicators help students understand their fitness level.
This program takes basic inputs such as waist, hip, height, and weight, and calculates:
· WHR(Waist-to-Hip Ratio) → indicates fat distribution
· BMI (Body Mass Index) → indicates whether a person is underweight, normal, or overweight The program is menu-driven and divided into modules for clarity.

HARDWARE REQUIREMENTS

Computer/Laptop
A computer/laptop is essential for running the program.

RAM
Minimum 1–2 GB RAM for smooth operation.

Processor
Pentium / Dual Core / i3 or above for efficient processing.

Storage
100 MB free storage space for program files.

Peripherals
Keyboard and monitor for input and display.

Operating System
Any operating system–compatible device (Windows/Linux/Mac).

SOFTWARE REQUIREMENTS
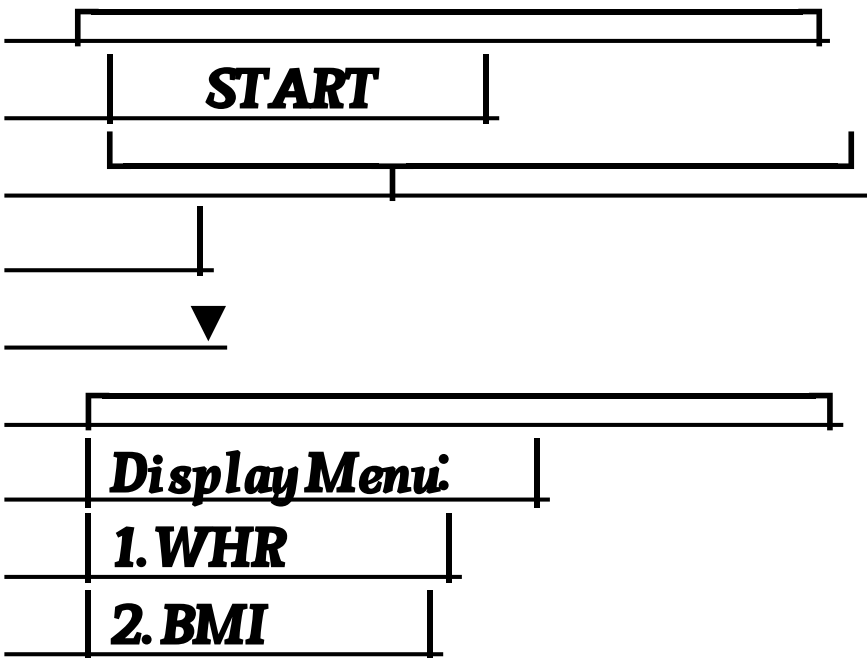
A C Compiler (any one) is required:

- GCC (MinGW / CodeBlocks)
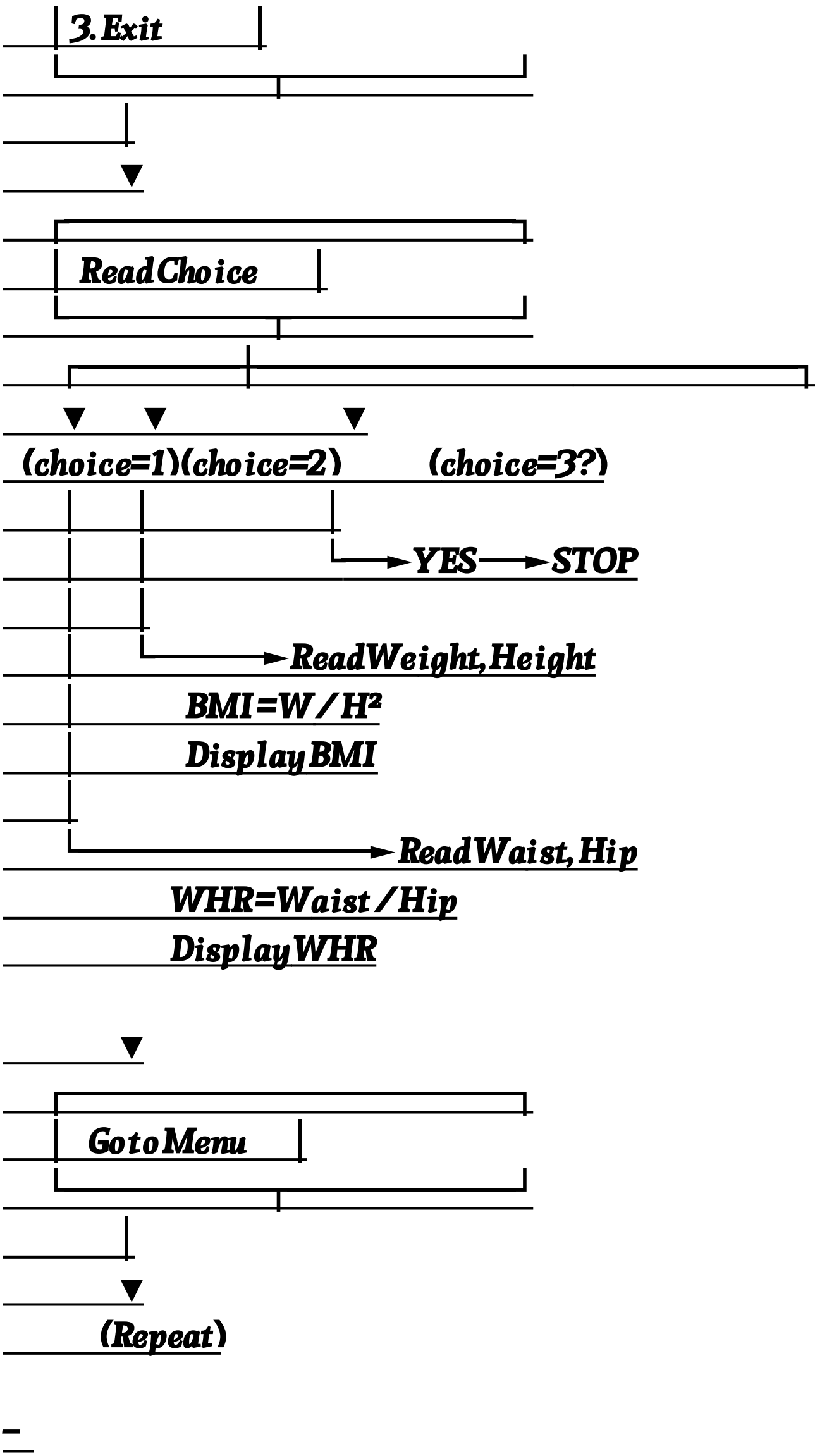- Turbo C / Turbo C++
- Dev-C++

Online compilers (optional) can also be used.

ALGORITHM

01

Start

02

Display Menu

- Calculate WHR
- Calculate BMI
- Exit

03

Read User Choice

04

If choice = 1

Read waist & hip, Calculate WHR = waist / hip, Display WHR

05

If choice = 2

Read height & weight, Calculate BMI = weight / (height * height), Display BMI

06

If choice = 3

Stop

07

Repeat Menu

Repeat menu until user exits

08

End

⭐ FLOWCHART

START

Display Menu:
1. WHR
2. BMI

3. Exit

↓

Read Choice

↓

(choice=1) (choice=2)   (choice=3?)

→ **YES** → **STOP**

→ **Read Weight, Height**

BMI = W / H²

Display BMI

→ **Read Waist, Hip**

WHR = Waist / Hip

Display WHR

↓

Go to Menu

↓

(Repeat)

MODULES

MODULE 1: WHR Calculation

Logic:

WHR = waist / hip

Code:

```
float calculateWHR(float waist, float hip) {
    return waist / hip;
}
```

MODULE 2: BMI Calculation

Logic:

BMI = weight / (height * height)

Code:

```
float calculateBMI(float weight, float height) {
    return weight / (height * height);
}
```

MODULE-INTEGRATION (MAIN PROGRAM)

```c
#include <stdio.h>

// ---- MODULE 1 ----
float calculateWHR(float waist, float hip) {
 return waist / hip;
}

// ---- MODULE 2 ----
float calculateBMI(float weight, float height) {
 return weight / (height * height);
}

// ---- MAIN PROGRAM ----
int main() {
 int choice;
 float waist, hip, height, weight;

 do {
 printf("\n===== STUDENT HEALTH TRACKER =====\n");
 printf("1. Calculate WHR\n");
 printf("2. Calculate BMI\n");
 printf("3. Exit\n");
 printf("Enter your choice: ");
 scanf("%d", &choice);

 switch(choice) {
 case 1:
 printf("Enter waist (cm): ");
 scanf("%f", &waist);
 printf("Enter hip (cm): ");
 scanf("%f", &hip);
 printf("Your WHR = %.2f\n", calculateWHR(waist, hip));
 break;
 case 2:
 printf("Enter weight (kg): ");
 scanf("%f", &weight);
 printf("Enter height (m): ");
 scanf("%f", &height);
 printf("Your BMI = %.2f\n", calculateBMI(weight, height));
 break;
 case 3:
 printf("Exiting program...\n");
 break;
 default:
 printf("Invalid choice! Try again.\n");
 }
 } while(choice != 3);

 return 0;
}
```

SAMPLE OUTPUT

```
===== STUDENT HEALTH TRACKER =====
1. Calculate WHR
2. Calculate BMI
3. Exit
Enter your choice: 1
Enter waist (cm): 80
Enter hip (cm): 90
Your WHR = 0.89

===== STUDENT HEALTH TRACKER =====
Enter your choice: 2
Enter weight (kg): 60
Enter height (m): 1.65
Your BMI = 22.04

===== STUDENT HEALTH TRACKER =====
Enter your choice: 3
Exiting program...
```

Project Acknowledgements

Thank You!

We extend our sincere gratitude to everyone who supported us throughout this project. Your encouragement and contributions were invaluable.

This project was a collaborative effort, bringing together diverse skills and perspectives to achieve a common goal. We are proud of the work accomplished and believe this Student Health Tracker will be a valuable tool.

Student Health Tracker C Project

Presented by:

Vanga Madhurima

Team Leader

Kolati Sagar

Team Mate

Joda Vincent

Team Mate