1- Write a program that asks the user to enter a number and prints the number between quotation marks.

اكتب برنامجًا يطلب من المستخدم إدخال رقم وطباعة الرقم بين علامتي التنصيص.

Input

```
Enter a number: 5
```

Output

```
The number between quotation marks: "5"
```

Solution

```c
#include <stdio.h>

int main() {
    int number;

    printf("Enter a number: ");
    scanf("%d", &number);

    printf("The number between quotation marks: \"%d\"\n", number);

    return 0;
}
```

2- Write a program that asks the user for their birth date (day, month, year)

كتابة برنامج يطلب من المستخدم تاريخ ميلاده (اليوم، الشهر، السنة)

Input

```
Enter your birthdate (day month year): 29-5-2003
```

Output

```
Your birthdate is: 29/5/2003
```

Solution

```c
#include <stdio.h>

int main() {
    int day, month, year;

    printf("Enter your birthdate (day month year): ");
    scanf("%d%*c%d%*c%d", &day, &month, &year);

    printf("Your birthdate is: %d/%d/%d\n", day, month, year);

    return 0;
}
```

3- Write a program that asks the user for their monthly salary, calculates the annual salary, and prints it

كتابة برنامج يطلب من المستخدم راتبه الشهري ويحسب الراتب السنوي ويطبعه

Input

```
Enter your monthly salary: 1000
```

Output

```
Your annual salary is: 12000
```

Solution

```c
#include <stdio.h>

int main() {
    int monthlySalary;

    printf("Enter your monthly salary: ");
    scanf("%d", &monthlySalary);

    int annualSalary = 12 * monthlySalary;

    printf("Your annual salary is: %d\n", annualSalary);

    return 0;
}
```

4- Write a program that asks the user for their age, calculates and prints their birth year

كتابة برنامج يسأل المستخدم عن عمره ويحسب ويطبع سنة ميلاده

Input

```
Enter your age: 20
```

Output

```
Your birthdate is : 2004
```

Solution

```c
#include <stdio.h>

int main() {
    int age;

    printf("Enter your age: ");
    scanf("%d", &age);

    printf("Your birth year is: %d\n", 2024 - age);

    return 0;
}
```

5- Write a program that asks the user for the number of liters of gasoline, calculates the number of kilometers the car can travel without refueling (assuming 23 km per liter), and prints it

اكتب برنامجًا يطلب من المستخدم عدد لترات البنزين، ويحسب عدد الكيلومترات التي يمكن للسيارة أن تقطعها دون التزود بالوقود (بافتراض 23 كيلومترًا لكل لتر)، ويطبعه

Input

```
Enter the number of liters of gasoline: 2
```

Output

```
The car can travel 46 kilometers without refueling.
```

Solution

```c
#include <stdio.h>

int main() {
    int litersOfGasoline;

    printf("Enter the number of liters of gasoline: ");
    scanf("%d", &litersOfGasoline);

    int kilometers = litersOfGasoline * 23;

    printf("The car can travel %d kilometers without refueling.\n", kilometers);

    return 0;
}
```

6- Write a program that asks the student for their grades in 5 subjects and prints the total and the missing grades
total = 500

اكتب برنامجًا يسأل الطالب عن درجاته في 5 مواد ويطبع المجموع والدرجات
الناقصة بفرض الدرجة النهائية من 500

Input

```
Enter your grades in 5 subjects: 90 80 70 100 75
```

Output

```
Total marks: 415
Missing marks: 85
```

Solution

```c
#include <stdio.h>

int main() {
    int grade1, grade2, grade3, grade4, grade5;

    printf("Enter your grades in 5 subjects: ");
    scanf("%d %d %d %d %d", &grade1, &grade2, &grade3, &grade4, &grade5);

    int totalMarks = grade1 + grade2 + grade3 + grade4 + grade5;
    int missingMarks = 500 - totalMarks;

    printf("Total marks: %d\n", totalMarks);
    printf("Missing marks: %d\n", missingMarks);

    return 0;
}
```

7- Write a program that asks the user for the number of chairs and tables they want to make and prints the total number of nails needed ,chair need 25 nails
tables need 30 nails.

كتابة برنامج يطلب من المستخدم عدد الكراسي والطاولات التي يريد صنعها
وطباعة العدد الإجمالي للمسامير المطلوبة ,
الكرسي يحتاج 25 مسمار
الطاولة تحتاج 30 مسمار

Input

```
Enter the number of chairs: 2
Enter the number of tables: 3
```

Output

```
Total nails needed: 140
```

Solution

```c
#include <stdio.h>

int main() {
    int chairs, tables;

    printf("Enter the number of chairs: ");
    scanf("%d", &chairs);

    printf("Enter the number of tables: ");
    scanf("%d", &tables);

    int totalNails = chairs * 25 + tables * 30;

    printf("Total nails needed: %d\n", totalNails);

    return 0;
}
```

8- Write a program that asks the user for their monthly subscription balance and its consumption in the current month and prints the new balance

كتابة برنامج يطلب من المستخدم رصيد اشتراكه الشهري واستهلاكه في الشهر الحالي وطباعة الرصيد الجديد

Input

```
Enter the monthly subscription balance: 100
Enter the consumption in the current month: 50
```

Output

```
New balance: 50
```

Solution

```c
#include <stdio.h>

int main() {
    int monthlyBalance, consumption;

    printf("Enter the monthly subscription balance: ");
    scanf("%d", &monthlyBalance);

    printf("Enter the consumption in the current month: ");
    scanf("%d", &consumption);

    int newBalance = monthlyBalance - consumption;

    printf("New balance: %d\n", newBalance);

    return 0;
}
```

9- Write a program that records prices of 5 products, asks the user for the quantity of each product, and prints the total amount

كتابة برنامج يسجل أسعار 5 منتجات ويطلب من المستخدم كمية كل منتج ويطبع المبلغ الإجمالي

Input

```
Enter the price of product 1: 50
Enter the price of product 2: 30
Enter the price of product 3: 40
Enter the price of product 4: 10
Enter the price of product 5: 20
Enter the quantity of each product: 2
2
2
2
2
```

Output

```
Total amount: 300
```

Solution

```c
#include <stdio.h>

int main() {
    int price1, price2, price3, price4, price5;
    int quantity1, quantity2, quantity3, quantity4, quantity5;

    printf("Enter the price of product 1: ");
    scanf("%d", &price1);

    printf("Enter the price of product 2: ");
    scanf("%d", &price2);

    printf("Enter the price of product 3: ");
    scanf("%d", &price3);

    printf("Enter the price of product 4: ");
    scanf("%d", &price4);

    printf("Enter the price of product 5: ");
    scanf("%d", &price5);

    printf("Enter the quantity of each product: ");
    scanf("%d %d %d %d %d", &quantity1, &quantity2, &quantity3, &quantity4, &quantity5);

    int totalAmount = price1 * quantity1 + price2 * quantity2 + price3 * quantity3 + price4 *
quantity4 + price5 * quantity5;

    printf("Total amount: %d\n", totalAmount);

    return 0;
}
```

---

10 - Write a program that calculates the shortfall (if any) by recording prices of 5 products and asking the cashier for the quantity of each product and the total amount paid

كتابة برنامج يحسب النقص (إن وجد) من خلال تسجيل أسعار 5 منتجات ومطالبة الصراف بكمية كل منتج وإجمالي المبلغ المدفوع

Input

```
Enter the price of product 1: 10
Enter the price of product 2: 20
Enter the price of product 3: 30
Enter the price of product 4: 40
Enter the price of product 5: 50
Enter the quantity of each product: 1
1
1
1
1
Enter the total amount paid: 100
```

Output

```
Shortfall: 50
```

Solution

```c
#include <stdio.h>

int main() {
    int price1, price2, price3, price4, price5;
    int quantity1, quantity2, quantity3, quantity4, quantity5;
    int totalAmountPaid;

    printf("Enter the price of product 1: ");
    scanf("%d", &price1);

    printf("Enter the price of product 2: ");
    scanf("%d", &price2);

    printf("Enter the price of product 3: ");
    scanf("%d", &price3);

    printf("Enter the price of product 4: ");
    scanf("%d", &price4);

    printf("Enter the price of product 5: ");
    scanf("%d", &price5);

    printf("Enter the quantity of each product: ");
    scanf("%d %d %d %d %d", &quantity1, &quantity2, &quantity3, &quantity4, &quantity5);

    printf("Enter the total amount paid: ");
    scanf("%d", &totalAmountPaid);

    int totalAmount = price1 * quantity1 + price2 * quantity2 + price3 * quantity3 + price4 *
quantity4 + price5 * quantity5;

    int shortfall = totalAmount - totalAmountPaid;

    printf("Shortfall: %d\n", shortfall);

    return 0;
}
```