ASSIGNMENT 1

PROGRAMMING FUNDAMENTALS

INSTRUCTIONS:

1.THE CODE MUST BE PASTED IN WORD DOCUMENT.

2. A screenshot of the output must also be included in the same Word document.

3. The output is not required to look exactly like the one given in the assignment. You may change it and make it more attractive. Using escape sequences to improve the output will earn grace marks.

4. Plagiarism is strictly forbidden. Each individual must complete the work independently as it is part of the learning process.

5. The naming format must be strictly followed as given in the instruction note:

23P-0603_Aimalkhan.docx for the Word file

23P-0603_Aimalkhan.c for the code file

6. Anyone who fails to follow the naming format will receive zero marks.

7. Everything covered in class so far is included in the assignment, so don't go beyond that.

8. Don't use conditional operator.

Program Requirements:

1. Welcome Screen

Display a decorative welcome message:

```
**************************************
WELCOME TO SMART UTILITY & SHOPPING HUB
**************************************
```

2. Display Current Date & Time

o Use:

```
#include <time.h>
 time_t tm;
 time(&tm);
 printf("Current Date/Time = %s", ctime(&tm));
```

3. Section A: Grocery Store Bill

- Display prices (per KG):
  - Rice = 300
  - Sugar = 200
  - Potatoes = 150
  - Apples = 400
- Ask user for required quantities of each item (in KG).
- Calculate total for each item using multiplication.
- Print a bill table with item, quantity, price per kg, and total.
- Calculate Grocery Subtotal.

4. Section C: Final Summary

- Add Grocery Subtotal = Grand Total.
- Assume customer pays with Rs. 10,000 note.
- Calculate balance to return.
- Break balance into minimum notes of Rs. 5000, 1000, 500, 100, 50, 20, 10, 5, 2, and 1.

5. Final Receipt

Print a decorative receipt with:

- Store Name
- Date & Time
- Grocery Bill Table
- Grand Total
- Amount Paid
- Balance Returned
- Breakdown of Notes

Final output should look like this:

****

WELCOME TO SMART UTILITY & SHOPPING HUB

****

 Current Date/Time = Wed Sep 11 03:12:45 2025

--- Grocery Section ---

Rice (2 KG @ 300)   = 600

Sugar (1.5 KG @ 200)   = 300

Potatoes (1 KG @ 150)   = 150

Apples (2 KG @ 400)   = 800

Grocery Subtotal   = 1850

Grand Total   = 1850

Amount Paid   = 10000

Balance Returned   = 8150

Notes:

1000 = 8

500 = 0

200 = 0

100 = 1

50 = 1

...

THANK YOU FOR USING SMART HUB!

NOTE:

- *Plagiarized assignments (copy from each other) will result in 0 marks.*
- *Write your solutions in the MS Word file.*
- *Save the MS Word file with the name as <yourRollNo_yourName>.docx*
- *For example, 25P-0603_AimalKhan.c*
- *Comment your code properly.*
- *Assignment after the due date will not be accepted.*