## **Question 1 Test Outputs: Calculating Change**

**Test Case 1: Checking the functionality of the program with almost every bill present**.

Enter the total cost of goods purchased: ₵724.03

Enter the amount paid: ₵2000

Essentials Store

Payment Receipt

Time: 18:50

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Total cost: GH₵724.03

Amount paid: GH₵2,000.00

Change: GH₵1,275.97

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Bills payable

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6 ₵200 cedis notes

1 ₵50 cedis notes

1 ₵20 cedis notes

1 ₵5 cedis notes

1 50p coins

2 20p coins

1 5p coins

2 1p coins

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Thank you for your purchase!

**Test Case 2: A case where the change is zero, no bills are printed.**

Enter the total cost of goods purchased: ₵350.20

Enter the amount paid: ₵350.20

Essentials Store

Payment Receipt

Time: 18:45

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Total cost: GH₵350.20

Amount paid: GH₵350.20

Change: GH₵0.00

Thank you for your purchase!

**Test Case 3: A case where the amount paid is less than the cost of goods purchased, no change is calculated.**

Enter the total cost of goods purchased: ₵20.90

Enter the amount paid: ₵20

Amount paid is insufficient!

**Test Case 4: A case where the total cost of goods is in pesewa only.**

Enter the total cost of goods purchased: ₵0.70

Enter the amount paid: ₵0.80

Essentials Store

Payment Receipt

Time: 18:30

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Total cost: GH₵0.70

Amount paid: GH₵0.80

Change: GH₵0.10

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Bills payable

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1 10p coins

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Thank you for your purchase!

## **Question 2 Test Outputs: Computing Treasury Bill Yields**

**Test Case 1: A case in which Nana Araba makes the investment for 14 periods**

**until she graduates in June 2026 with an APR of 28.8845 on a quarterly period.**

Output:

Welcome to Daisy Investment Fund Company!

Fill in the details below to calculate your total investment and total interest for your chosen maturity period.

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Principal: 500

Annual Rate: 28.8845

Number of periods per year: 4

Deposits after the initial principle: 100

Total periods for accruement:

14

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Total value of investment: GH₵3,517.78

Total interest earned over the period: GH₵1,717.78

**Test Case 2: A case in which Nana Araba is able to deposit ¢400 (instead of ¢100) every three months, until her graduation.**

Output:

Welcome to Daisy Investment Fund Company!

Fill in the details below to calculate your total investment and total interest for your chosen maturity period.

-----------------------------------------

Principal: 500

Annual Rate: 28.8845

Number of periods per year: 4

Deposits after the initial principle: 400

Total periods for accruement:

14

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Total value of investment: GH₵10,089.90

Total interest earned over the period: GH₵4,389.90

**Test Case 3: A case in which Nana Araba deposits the ¢500 as principle on a yearly period but decides to collect it after one year.**

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Welcome to Daisy Investment Fund Company!

Fill in the details below to calculate your total investment and total interest for your chosen maturity period.

-----------------------------------------

Principal: 500

Annual Rate: 28.8845

Number of periods per year: 1

Deposits after the initial principle: 100

Total periods for accruement:

1

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Total value of investment: GH₵644.42

Total interest earned over the period: GH₵144.42

**Test Case 4: A case in which Nana Araba does not make any additional deposits after the first principal.**

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Principal: 500

Annual Rate: 28.8845

Number of periods per year: 4

Deposits after the initial principle: 0

Total periods for accruement: 14

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Total value of investment: GH₵1,327.07

Total interest earned over the period: GH₵827.07

## **Question 3: Generating a random password.**

**Test Case 1: Checking the functionality of the password for a given set of specifications.**

Create your desired strong password by filling out the details below:

Minimum password length e.g. '8 or 10 or 15': 20

Minimum number of uppercase letters: 2

Minimum number of digits: 4

Allowed the special characters e.g '#@&': @#$%^&!\*

Minimum number of special characters: 4

Password: U2!oA4%l1$y7#xfzrpyufa

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Verifying the password....

Password length: 22

Number of uppercase letters: 2

Number of digits: 4

Number of special characters: 4

.........Password is valid!

**Test Case 2: A case where all only the password length is a requirement and no uppercase or digits or special characters are needed.**

Create your desired strong password by filling out the details below:

Minimum password length e.g. '8 or 10 or 15': 10

Minimum number of uppercase letters: 0

Minimum number of digits: 0

Allowed the special characters e.g '#@&': %

Minimum number of special characters: 0

Password: jhstjvzotkukob

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Verifying the password....

Password length: 14

Number of uppercase letters: 0

Number of digits: 0

Number of special characters: 0

.........Password is valid!

**Test Case 3: A case where we have only one special character allowed but more that one character is required by the password.**

Create your desired strong password by filling out the details below:

Minimum password length e.g. '8 or 10 or 15': 12

Minimum number of uppercase letters: 3

Minimum number of digits: 1

Allowed the special characters e.g '#@&': @

Minimum number of special characters: 3

Password: V4@aS@uY@lycbgpfo

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Verifying the password....

Password length: 17

Number of uppercase letters: 3

Number of digits: 1

Number of special characters: 3

.........Password is valid!