

# Assignment

Question;

Osman earns 1million ugx, he is entitled to pay 30% of PAYE and 11% of NSSF. Calculate his net pay.

Visualize what is needed in terms of

1. Memory
2. Programming

## Answers

### 1. Visualize in terms of Memory

Net pay = Gross pay – Deductions

Deductions in this case are PAYE and NSSF.

Net pay = Gross pay – (PAYE+NSSF)

I would reserve space for;

1<sup>st</sup> space for gross pay which in this case is 1,000,000 ugx

2<sup>nd</sup> space for the PAYE percentage (30%)

3<sup>rd</sup> space for the NSSF percentage (11%)

4<sup>th</sup> space for calculating NSSF

$$0.11 * 1,000,000$$

$$\text{NSSF} = 110,000 \text{ UGX}$$

5<sup>th</sup> space for calculating PAYE

If salary exceeds 410,000, we add Ushs 25,000 plus 30% of the amount by which chargeable income exceeds Ushs. 410,000

$$25,000 + 0.3 * (1,000,000 - 410,000)$$

$$\text{PAYE} = 202,000 \text{ UGX}$$

6<sup>th</sup> space for getting net pay

Net pay = Gross pay – (PAYE+NSSF)

$$1,000,000 - (202,000 + 110,000)$$

$$\text{Net pay} = 688,000 \text{ UGX}$$

So I need 6 spaces in memory in order to get Osman's Net pay

### 2. Visualize in terms of programming

I would declare 6 variables

1<sup>st</sup> variable for the Gross pay

2<sup>nd</sup> variable to store PAYE percentage (30%)

3<sup>rd</sup> variable to store NSSF percentage (11%)

4<sup>th</sup> variable to store how much Osman pays for PAYE

5<sup>th</sup> variable to store how much Osman pays for NSSF

6<sup>th</sup> variable to store the net pay

I would then initialize 3 variables that is gross pay of 1million, PAYE % which is (30%) and NSSF % which is (11%).

I would then use the 1<sup>st</sup> and 2<sup>nd</sup> variable to calculate the value to store in the 4<sup>th</sup> variable

I would also use the 1<sup>st</sup> and 3<sup>rd</sup> variable to get the value to store in the 5<sup>th</sup> variable

Lastly I would use the 1<sup>st</sup>, 4<sup>th</sup> and 5<sup>th</sup> variable to get the value to store in the 6<sup>th</sup> variable which in this case is the net pay