

**Name:** M Tashfeen Abbasi

**Roll No:** 22I-2041

**Section:** D

## **Task 01**

### **Volume Calculations**

- 1) Display "Equatorial\_Radius"
- 2) Input equatorial radius
- 3) Display "Shorter\_polar\_radius"
- 4) Input shorter polar radius
- 5) Display "Longer\_polar\_radius"
- 6) Input longer polar radius
- 7) Set  $V = ((2 * \pi) / 3) * (a * a * (b + c))$
- 8) Display "Volume of eggshell", V;

### **EXPLANATION:**

In this task we have to find volume of of eggshell, for that first we have to input equatorial radius from the user through variable name equatorial radius ;then I INPUT SHOTER Polar radius from the user .then last we input long polar radius through users. finally find the volume through through formula  $V = ((2 * \pi) / 3) * (a * a * (b + c))$ .

## **Task 02**

### **Surface Area**

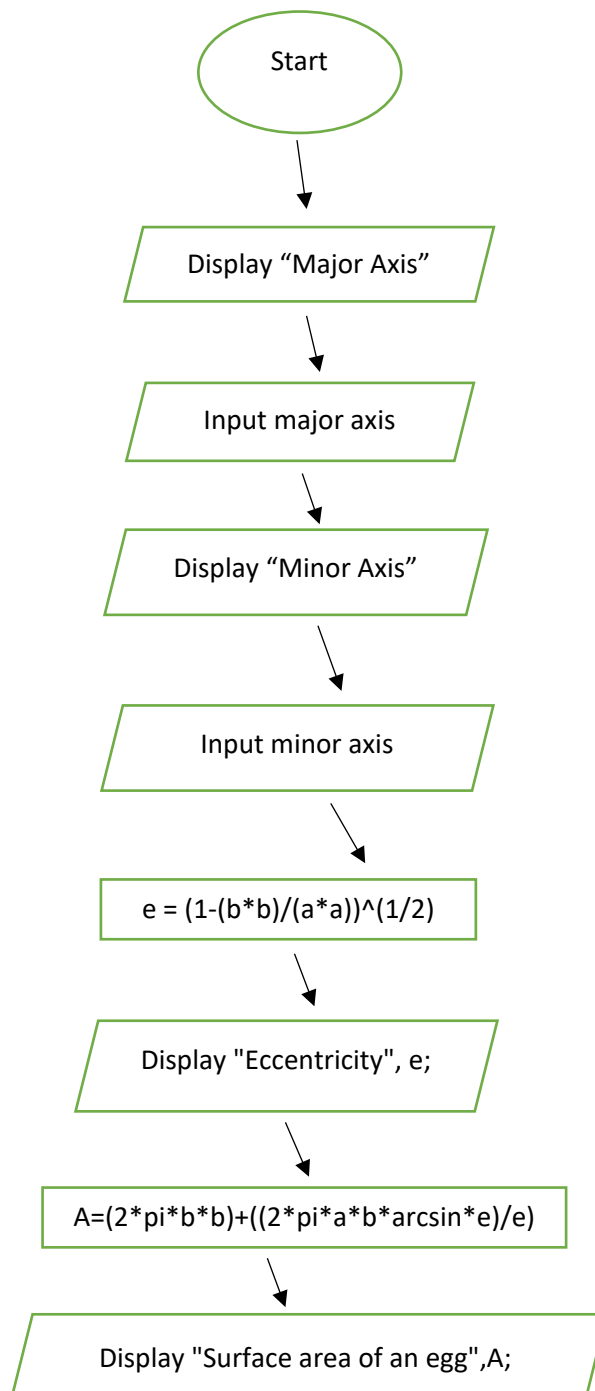
- 1) Display "Major Axis"
- 2) Input major axis
- 3) Display "Minor Axis"
- 4) Input Minor axis
- 5) set  $e = (1 - (b * b) / (a * a))^{(1/2)}$
- 6) Display "Eccentricity" ,e;
- 7) set  $X = (2 * \pi * b * b) + ((2 * \pi * a * b * \arcsin * e) / e)$
- 8) Display "Surface area of an egg", X;

### **EXPLANATION:**

Firstly ,i input major axis from the user that is name through variable a. Then, I input minor axis from the user through the variable name as b. Then I found the eccentricity through the formula provided such as  $e = (1 - (b*b)/(a*a))^{(1/2)}$  than, according to the question I have to find surface area of egg. i found this through the formula such as  $(2*pi*b*b) + ((2*pi*a*b*arcsin*e)/e)$ .

### Data Types

- 1) int a,b
- 2) const float pi=3.1416
- 3) float e
- 4) float A



### **Task 03**

#### **Number of Eggs**

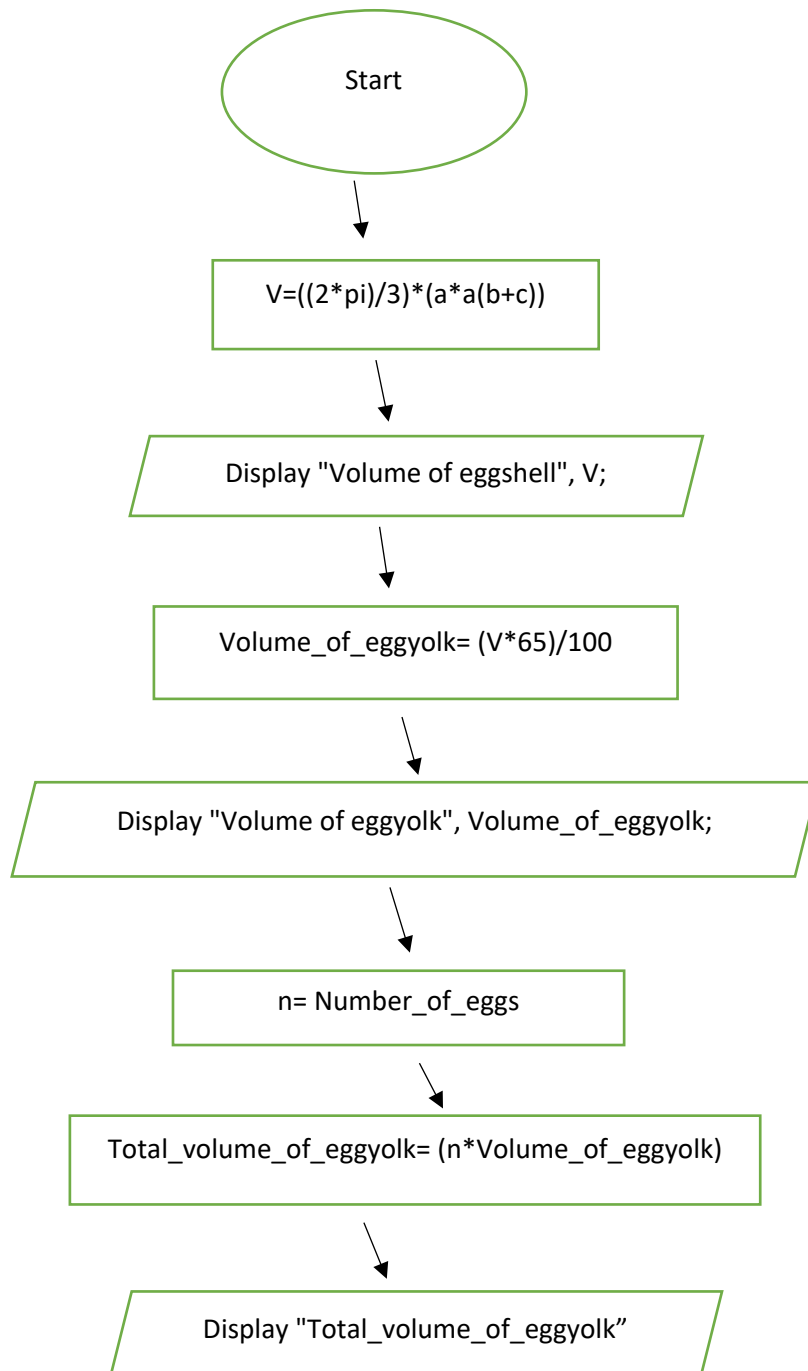
- 1) Display "Area of image"
- 2) Input area of image
- 3) Set area of eggshell = (Area of image\*25.77)/100
- 4) Set No of eggs = Area of eggshells/Area of egg
- 5) Display "No of Eggs", no of eggs;

### **Task 04**

#### **Total Volume of Egg yolk**

- 1) set  $V = ((2 \cdot \pi) / 3) \cdot (a \cdot a(b+c))$
- 2) Display "Volume of eggshell", V;
- 3) set Volume\_of\_egg yolk =  $(V \cdot 65) / 100$

- 4) Display "Volume of eggypolk", Volume\_of\_eggyolk;
- 5) set n= Number\_of\_eggs
- 6) set Total\_volume\_of\_eggyolk= (n\*Volume\_of\_eggyolk)
- 7) Display "Total\_volume\_of\_eggyolk"



**EXPLANATION:**

First I have calculated the volume of eggshell through the formula given in the first question such as  $v = (2 \cdot \pi / 3) \cdot (a \cdot a) \cdot (b + c)$ , then find volume of the egg yolk that was 65 percent of volume of egg. I use simple formula such as  $(v \cdot 65) / 100$ . After this I assign the same value as no of eggs I found in task 3. Finally I found total volume of egg yolk by multiplying numbers of eggs with volume of egg yolk to find total volume of egg yolk.