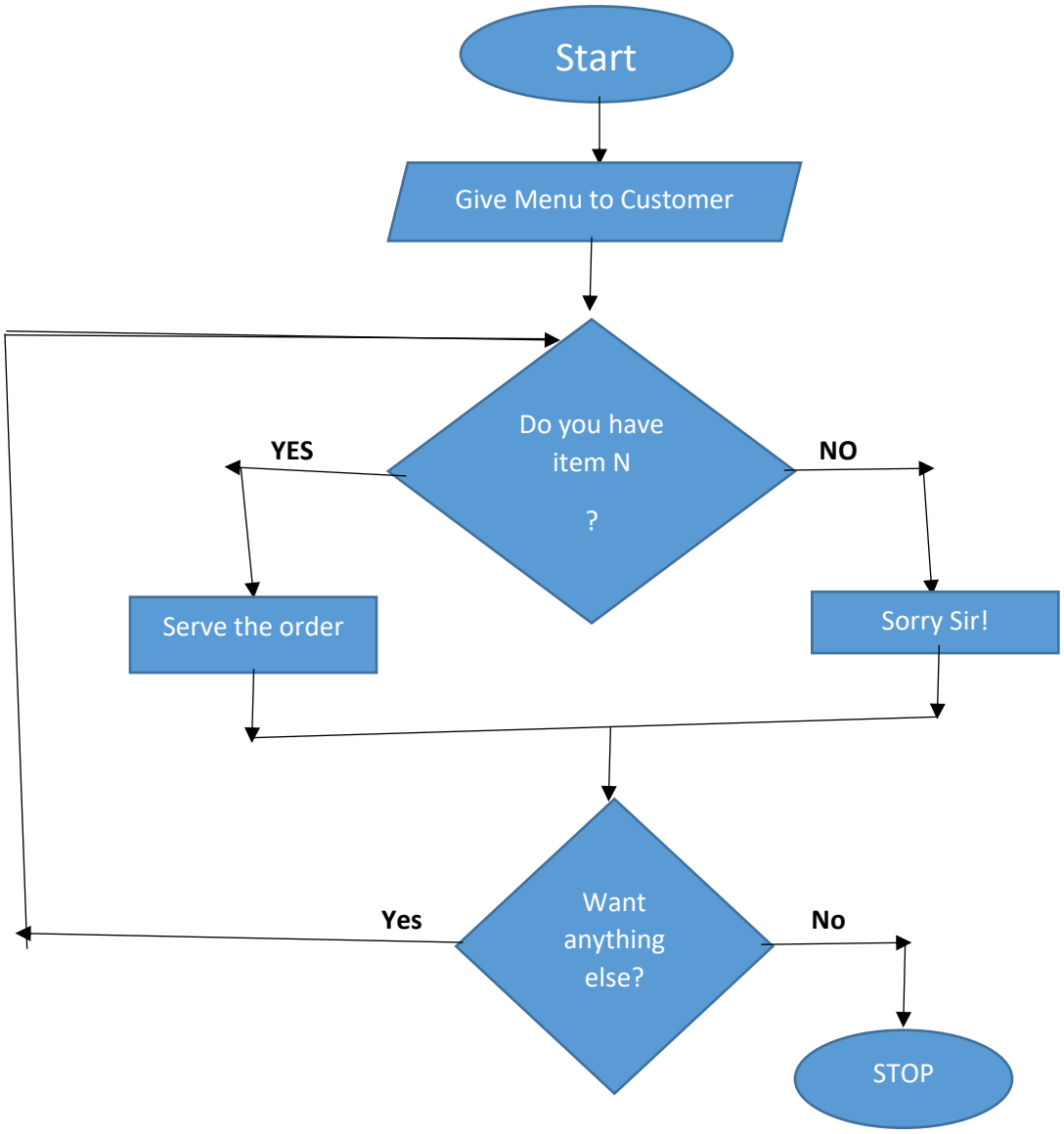
Q1: Design a flowchart, Pseudocode, Algorithm for processing a customer order at a restaurant, including handling special requests (Like add on).



Algorithm:

Step 01: Start

Step 02: Give Menu to Customer

Step 03: Take Order

Step 04: Repeat

do you have item N?

Step 05: Check If N item are available

Then

Print (“Serve The order”)

Else

Print (“Sorry Sir! N item are not available”)

Step 06: Want anything else Sir?

If yes

Then “go to the Step 4”

Else

Print “Stop”

Pseudocode

Start

Give menu to customer and take a order

Customer order N item

Check N item

If N item are available

then

Print “Serve the order”

Else

Print “Sorry Sir! N item are not available”

Endif

Want anything else?

If yes

Then

Print “Serve the order”

Else

Print “stop”

End

Q2: Cash Withdrawal

Algorithm:

Step 1: Start

Step 2: Take a ATM Card

Step 3: Go to Bank

Step 4: Insert a ATM Card in ATM Machine

Step 5: Enter ATM PIN

Step 6: If ATM pin are correct

then

Print “Go to Next Step”

Else

Print “Sorry ATM pin are incorrect transition Failed”

End

Step 7: Enter the Amount and withdraw the amount

Step 8: withdrawal Complete

Step 9: Take ATM Card and Amount

Step 10: Stop

Pseudocode

Start

Go to bank and insert a atm card into atm machine

Enter your pin

Enter the amount and withdraw the amount

Take a atm card and amount and go back to home

End

Q3: Write a Pseudocode, Algorithm to determine which of three provided numbers is the greatest.

Algorithm

Step 1: Start

Step 2: Input a, b, c

Step 3: if a > b

Then

max = a

Else

max = b

Endif

Step 4: if max > c

Then

Print “Greater number is max”

Else

Print “c is greater number”

Endif

Step 5: Stop

Pseudocode

Start

Input A

Input B

Input C

if a > b Then

Max-Number = a

Else if b > c Then

Max-Number = b

Else

Max-Number = c

Endif

if Max-Number > c Then

Print “Greater number is max”

Else

Print “c is greater number”

End

Q4: Implement an algorithm where the user enters a number, and an appropriate month is displayed.

Algorithm:

Step 1: Start

Step 2: Input Number

Step 3: If Number = 1

Print “January”

Else Number = 2

Print “February”

Else Number = 3

Print “March”

Else Number = 4

Print “April”

Else Number = 5

Print “May”

Else Number = 6

Print “June”

Else Number = 7

Print “July”

Else Number = 8

Print “August”

Else Number = 9

Print “September”

Else Number = 10

Print “October”

Else Number = 11

Print “November”

Else Number = 12

Print “December”

Else Number >12

Print “Error”

Step 4: Stop

Q5: Create pseudocode a small calculator which only does ‘+’ or ‘-‘Operations.

Pseudocode

Start

Input a, b

Input Operator (+ or -)

If +

Print (a + b)

Else -

Print (a - b)

Else print “Invalid Operator”

End

Q7: Implement an algorithm for making a simple calculator with all the operators (+,-,*,/,%).

Pseudocode

Start

Input X

Input Y

Input Operator (+ or - or * or / or %).

If +

Print (X+Y)

Else -

Print (X-Y)

Else *

Print (X*Y)

Else /

Print(X/Y)

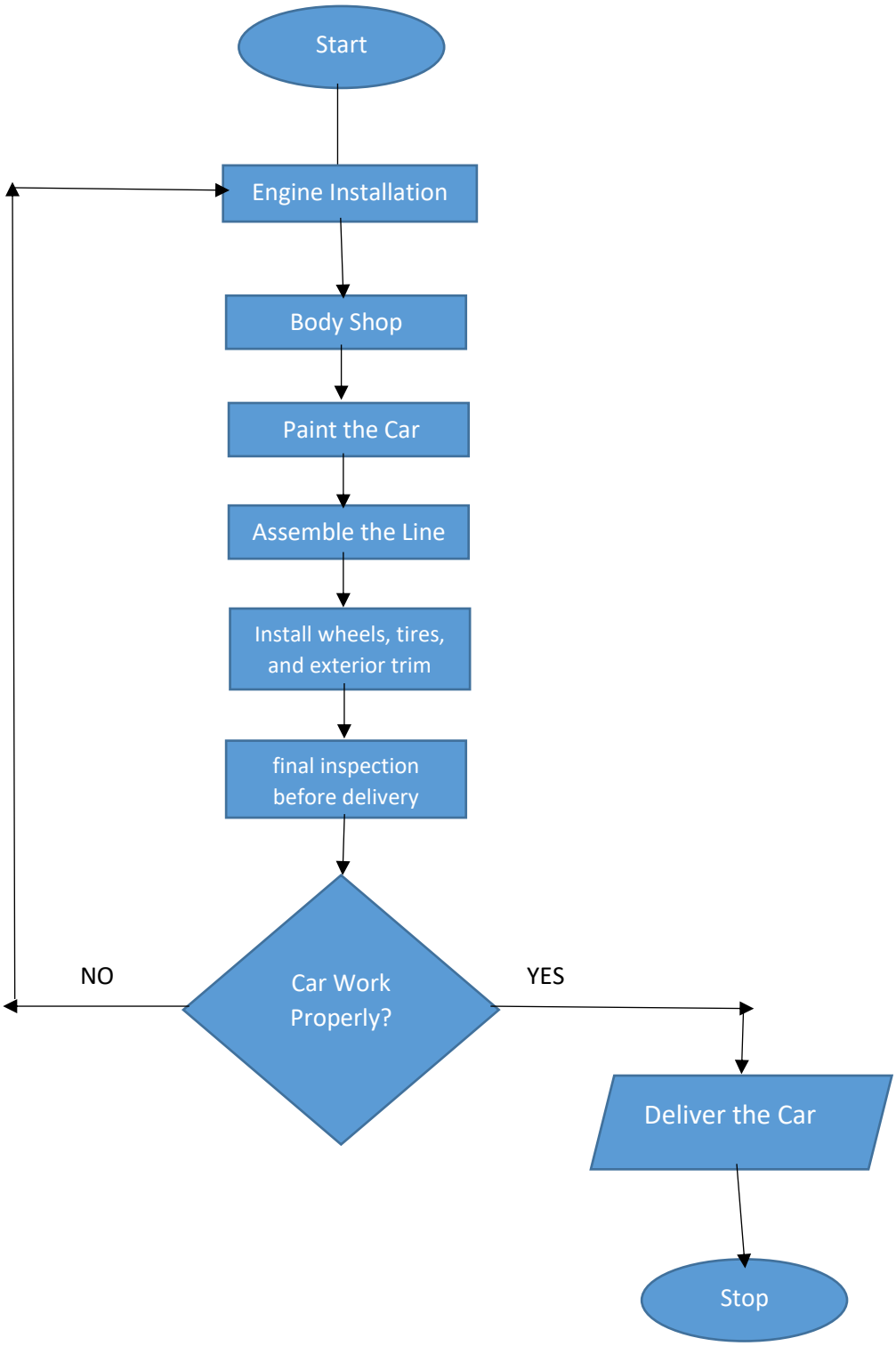
Else %

Print (X%Y)

Else “Invalid Operator”

End

Q6: You are working at Toyota Indus Motors and want to assemble a car. Design a flowchart with proper process modules and decision structures to replicate a pipeline production.



Q10: Difference between Algorithm and Pseudocode?

Algorithm:

- An Algorithm is step-by-step instruction for a solving problem.
- Algorithm can be expressed in various form, such as
  1) Natural language
  2) Flowchart

Pseudocode:

- Pseudocode is a high-level representation of a computer program.
- Uses plain language to describe the program's flow and logic.
- Pseudocode typically includes elements like: variable, data types, if/else etc.

Q9: Why we use .gitignore?

- We use .gitignore to tell git which files to ignore in a repository. This is useful for several reasons.
  1) Reduce Repository size
  2) Exclude unnecessary files
  3) Keep sensitive data private