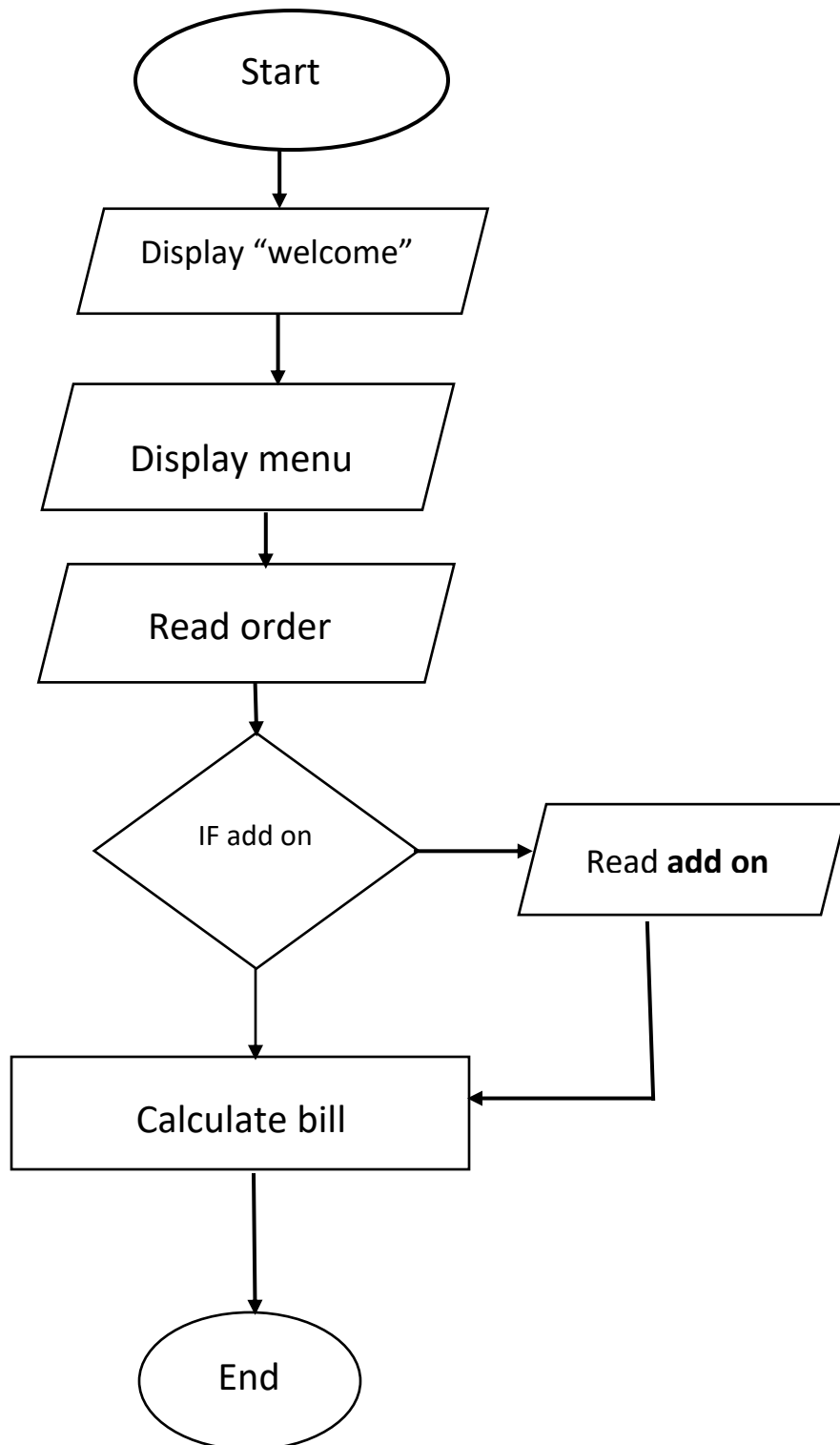# LAB WORK 2

QUESTION #1

ALGORITHM:

1. Display greetings to the customer.

2. Offer the menu to the customer.

3. Take the order.

4. Ask the customer to add on something.

5. Tell the waiting time.

6. Calculate the bill.

7. Serve the order.

8. Display thank you.

PSEUDOCODE:

1. Start.
2. Display "Welcome to our restaurant."
3. Display menu.
4. Read order.
5. If add on
   then read add on
   else
   Display waiting time
   End if
6. Calculate the bill.
7. Serve the order
8. Display "thank you"

9. End.

FLOWCHART:

```
                    ┌─────────────┐
                   (    Start      )
                    └──────┬──────┘
                           │
                           ▼
              ╱─────────────────────╱
             ╱   Display "welcome"  ╱
            ╱─────────────────────╱
                           │
                           ▼
              ╱─────────────────────╱
             ╱    Display menu      ╱
            ╱─────────────────────╱
                           │
                           ▼
              ╱─────────────────────╱
             ╱     Read order       ╱
            ╱─────────────────────╱
                           │
                           ▼
                        ◇─────◇
                       ╱ IF add ╲ ──────────►  ╱─────────────╱
                       ╲   on   ╱              ╱  Read add on ╱
                        ◇─────◇              ╱─────────────╱
                           │                        │
                           ▼                        │
              ┌─────────────────────┐◄──────────────┘
              │    Calculate bill   │
              └──────────┬──────────┘
                         │
                         ▼
                    ┌─────────┐
                   (    End    )
                    └─────────┘
```
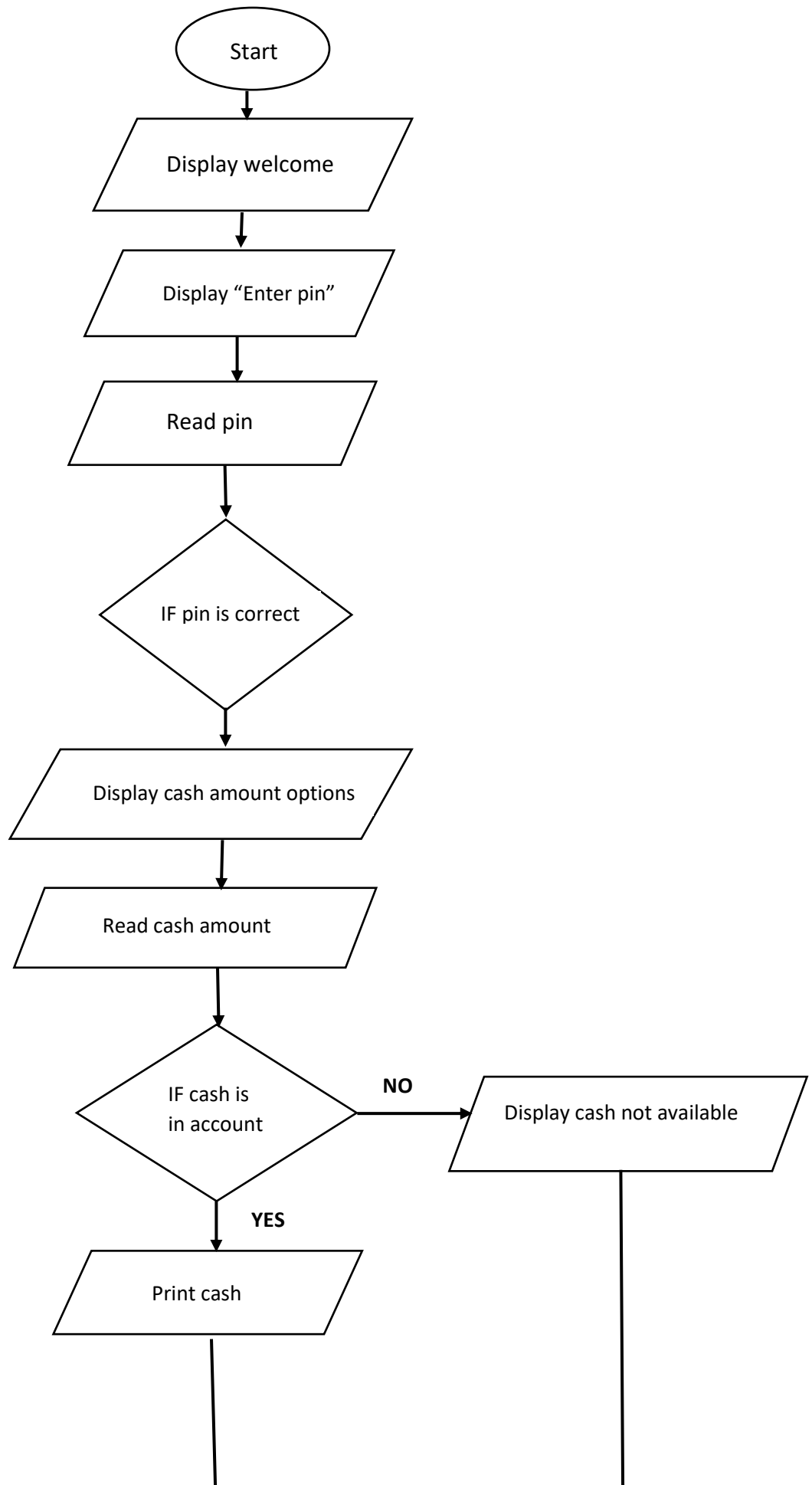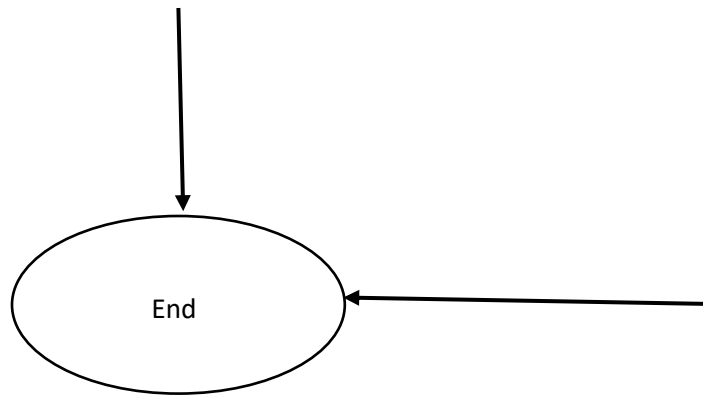
QUESTION # 2

ALGORITHM:

1. Display welcome.
2. Ask the user to enter pin.
3. Read the pin whether it is correct or not.
   IF correct proceed to withdrawal.
4. Ask the cash withdrawal amount.
5. Read withdrawal amount.
6. Check if selected amount is available or not in account
   IF available proceed to withdrawal.
7. Print cash.
8. Display thank you.

PSEUDOCODE:

1. Start.
2. Display "welcome"
3. Display "Enter pin"
4. Read pin
IF correct proceed to withdrawal.
Else
   Display "enter pin"
5. Display "select cash amount"
6. Read cash amount.
IF cash is present in account
   then proceed to withdrawal.
Else
Display "cash is not available in your account"
7. Print cash.
8. Display "thank you"

FLOWCHART

Start

Display welcome

Display "Enter pin"

Read pin

IF pin is correct

Display cash amount options

Read cash amount

IF cash is in account — **NO** → Display cash not available

YES

Print cash

End

QUESTION # 3

ALGORITHM:

1. Ask the user to enter number 1
2. Read NUM1
3. Ask the user to enter number 2
4. Read NUM2
5. Ask the user to enter number 3
6. Read NUM3
7. IF NUM1>NUM2 and NUM3
   then display NUM1 is greatest.
8. IF NUM2> NUM1 and NUM3
   then display NUM2 is greatest.
9. IF NUM3>NUM1 and NUM2
   then display NUM3 is greatest.
10. End.

PSEUDOCODE:

1. Start
2. Display "Enter Number 1"
3. Read NUM1.
4. Display "Enter Number 2"
5. Read NUM2.
6. Display "Enter Number 3"
7. Read NUM3.
8. IF NUM1>NUM2 and NUM 3

then print "Number 1 is greatest", NUM1

IF NUM2 > NUM1 and NUM3

   then print "Number 2 is greatest", NUM2

IF NUM3 > NUM1 and NUM2

   then print "Number 3 is greatest", NUM3

End if.

9. End if

FLOWCHART

Start

Display "Enter Number
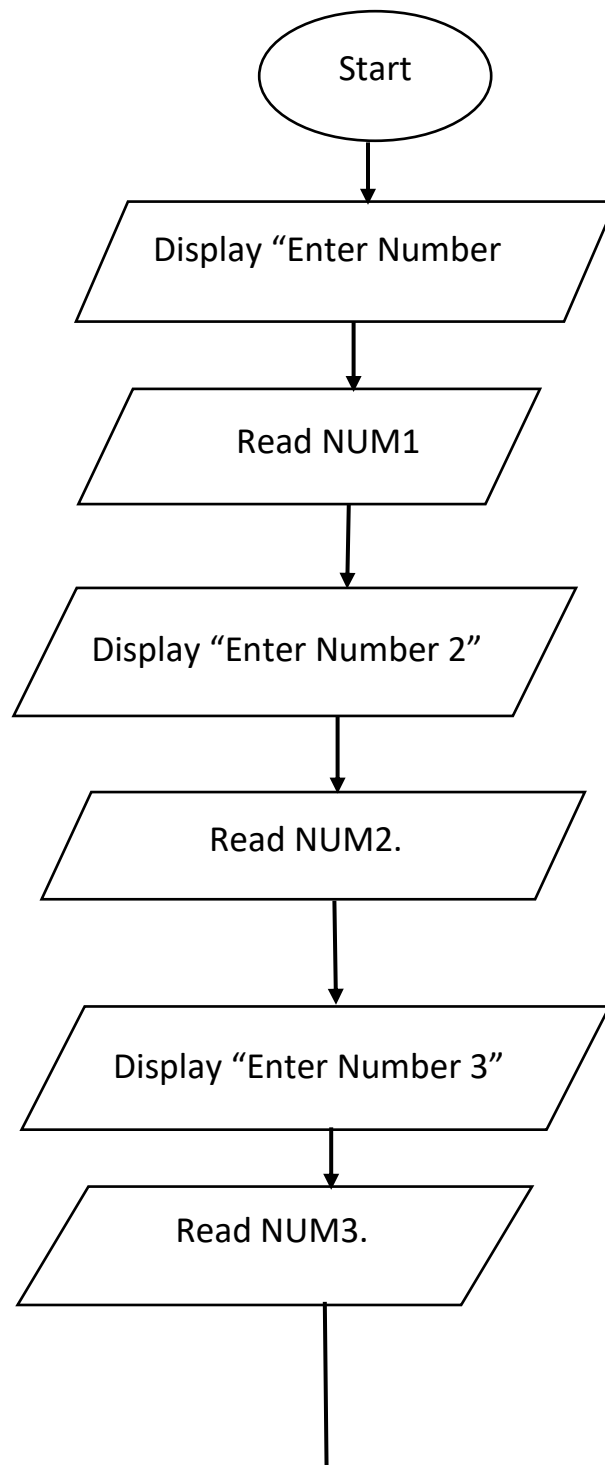
Read NUM1
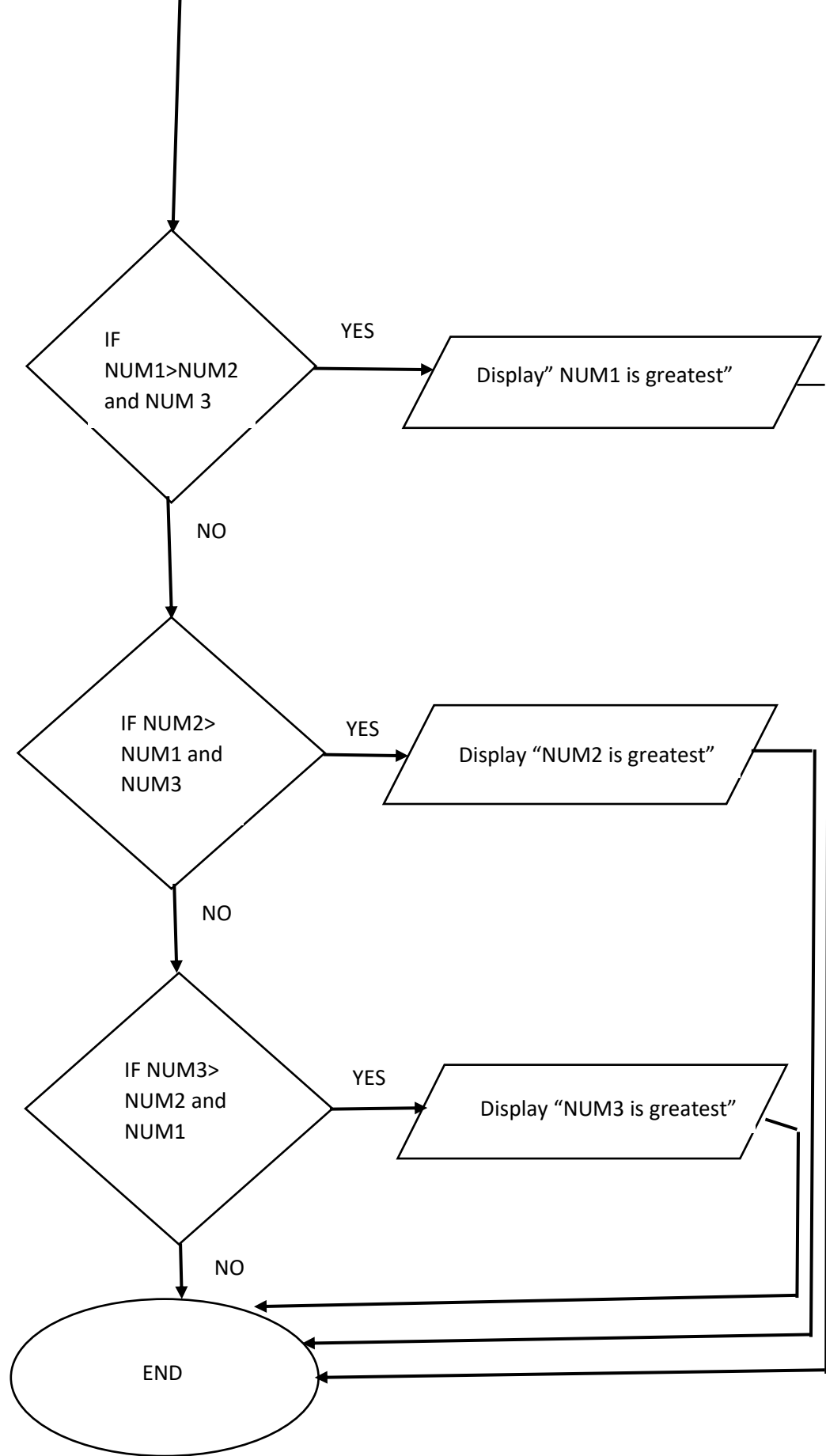
Display "Enter Number 2"

Read NUM2.

Display "Enter Number 3"

Read NUM3.

```
                              │
                              │
                              ▼
                            ╱╲
                          ╱    ╲
                        ╱        ╲         YES
                      ╱    IF      ╲──────────────────►  ┌─────────────────────────────┐
                      ╲  NUM1>NUM2 ╱                      │ Display" NUM1 is greatest"  │
                        ╲ and NUM 3╱                      └─────────────────────────────┘
                          ╲      ╱
                            ╲  ╱
                             ╲╱
                              │ NO
                              │
                              ▼
                            ╱╲
                          ╱    ╲
                        ╱        ╲         YES
                      ╱ IF NUM2>   ╲──────────────────►  ┌─────────────────────────────┐
                      ╲  NUM1 and  ╱                      │ Display "NUM2 is greatest"  │
                        ╲  NUM3   ╱                       └─────────────────────────────┘
                          ╲      ╱
                            ╲  ╱
                             ╲╱
                              │ NO
                              │
                              ▼
                            ╱╲
                          ╱    ╲
                        ╱        ╲         YES
                      ╱ IF NUM3>   ╲──────────────────►  ┌─────────────────────────────┐
                      ╲  NUM2 and  ╱                      │ Display "NUM3 is greatest"  │
                        ╲  NUM1   ╱                       └─────────────────────────────┘
                          ╲      ╱
                            ╲  ╱
                             ╲╱
                              │ NO
                              ▼
                        ╭──────────╮
                        │          │
                        │   END    │
                        │          │
                        ╰──────────╯
```

QUESTION # 4:

- ➢ Start.
- ➢ Ask the user to enter a number between 1 to 12
- ➢ Read number

If number==1
  then display January
else if number=2
  then display February
else if number==3
  then display March
else if number==4
  then display April
else if number==5
  then display May
else if number==6
  then display June
else if number==7
  then display July
else if number==8
  then display August
else if number==9
  then display September
else if number==10
  then display October
else if number==11
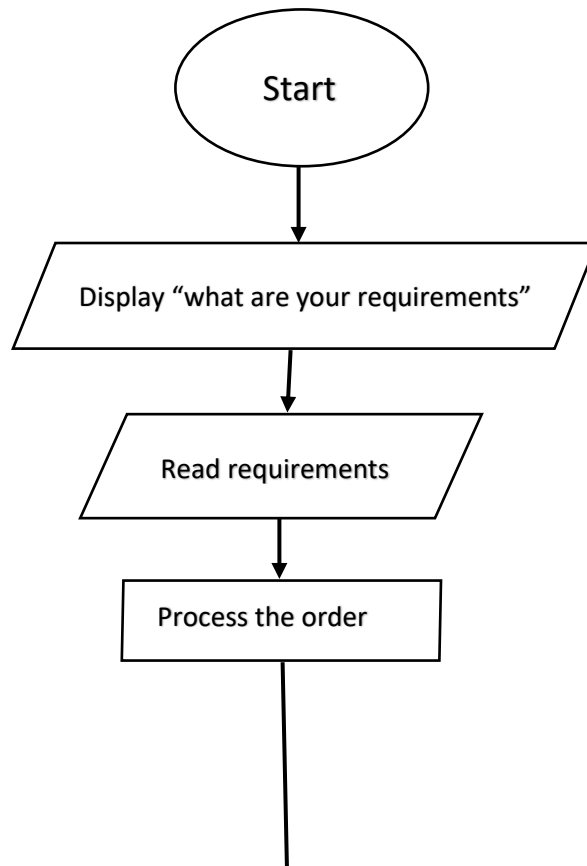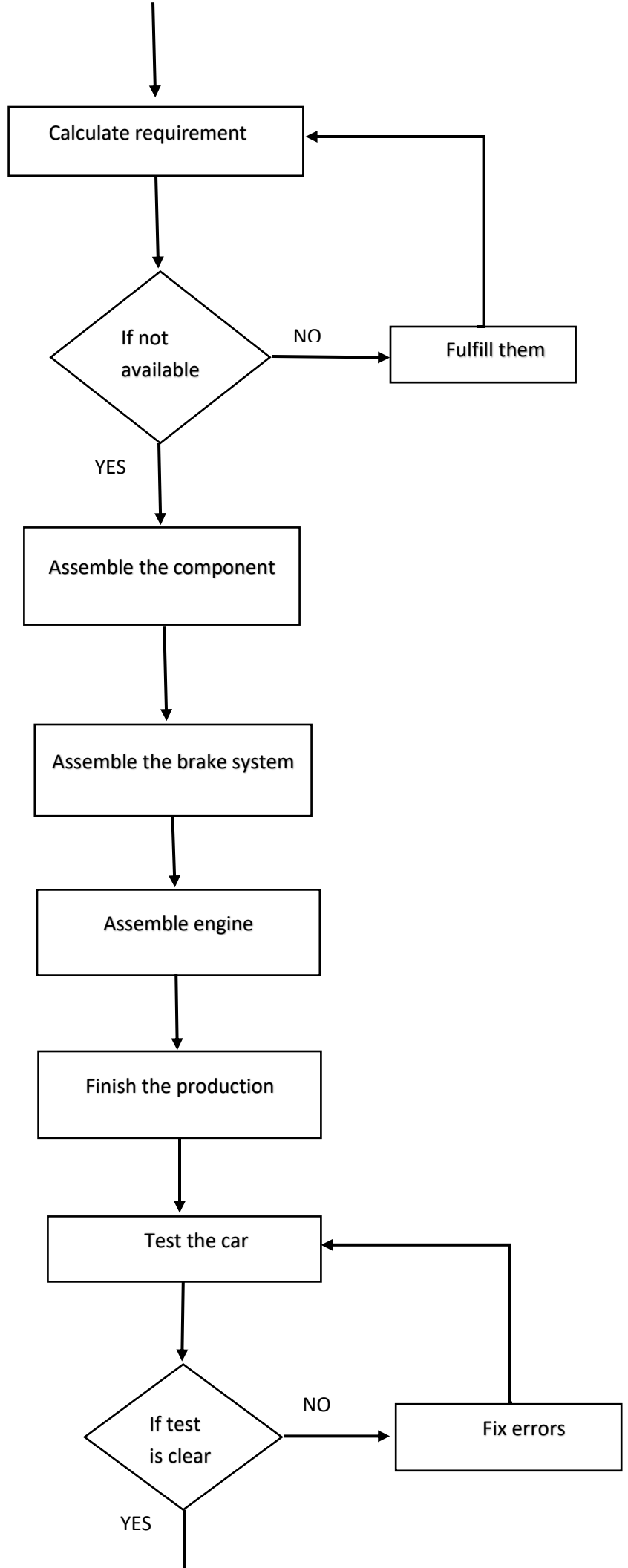 then display November
else if number==12
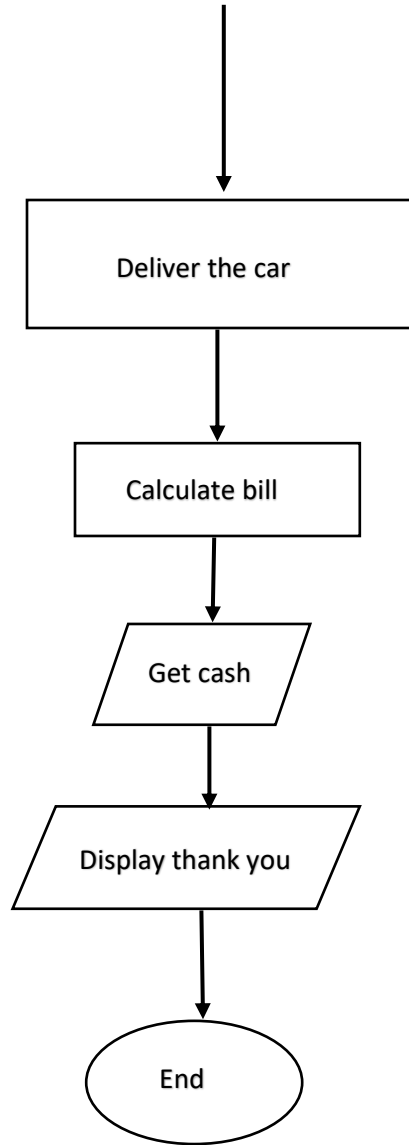 then display December
- ➢ End.

QUESTION # 5

- ➢ Start.
- ➢ Ask the user to enter a number.
- ➢ Input NUM1
- ➢ Ask the user to enter second number.
- ➢ Input NUM2
- ➢ Display "Enter an operation + or – ''
- ➢ Input operation

  If operation == +

  then calculate sum=NUM1+NUM2

  display sum

  else if operation == -

  then calculate difference=NUM1-NUM2

  display difference
- ➢ End

QUESTION # 6

Start

Display "what are your requirements"

Read requirements

Process the order

```
                              │
                              ▼
                    ┌──────────────────────┐
                    │ Calculate requirement │◄──────────┐
                    └──────────────────────┘           │
                              │                          │
                              ▼                          │
                          ╱───────╲                      │
                        ╱           ╲      NO    ┌──────────────┐
                       ╱  If not      ╲─────────►│ Fulfill them │
                       ╲  available   ╱          └──────────────┘
                        ╲           ╱
                          ╲───────╱
                              │
                         YES  │
                              ▼
                    ┌──────────────────────┐
                    │ Assemble the component │
                    └──────────────────────┘
                              │
                              ▼
                    ┌──────────────────────┐
                    │ Assemble the brake system │
                    └──────────────────────┘
                              │
                              ▼
                    ┌──────────────────────┐
                    │    Assemble engine     │
                    └──────────────────────┘
                              │
                              ▼
                    ┌──────────────────────┐
                    │ Finish the production  │
                    └──────────────────────┘
                              │
                              ▼
                    ┌──────────────────────┐
                    │     Test the car       │◄──────────┐
                    └──────────────────────┘           │
                              │                          │
                              ▼                          │
                          ╱───────╲                      │
                        ╱           ╲      NO    ┌──────────────┐
                       ╱  If test     ╲─────────►│  Fix errors  │
                       ╲  is clear    ╱          └──────────────┘
                        ╲           ╱
                          ╲───────╱
                              │
                         YES  │
                              ▼
```

Deliver the car

Calculate bill

Get cash

Display thank you

End

QUESTION # 6

➢ Start.

➢ Ask the user to enter a number.

➢ Read NUM1

➢ Ask the user to enter another number.

➢ Read NUM2

➢ Display "Enter operation (+, -, /, %)"

➢ Read OP

   If OP = /

     then calculate result =NUM1/NUM2

       else if OP=*

         then calculate result=NUM1*NUM2

           else if OP== +

         then calculate result=NUM1+NUM2

           else if OP==NUM1-NUM2

         then calculate result=NUM1-NUM2

           else if OP== %

         then calculate result=%NUM and %NUM2

➢ Display result

➢ End.

QUESTION # 9

Gitignore is very useful as it tells us about the files and repositories that we should ignore in git. It also has the following uses:

- The files that we add in gitignore cannot be tracked or added in the repository.

- It keeps our repository clean and organized.

- We can manage files efficiently.

- It also helps us to protect our sensitive data.

- It also prevents from adding certain files in the repositories.

QUESTION # 10

ALGORITHM	PSEUDOCODE
o Algorithm is a step by step procedure to solve a specific problem.	o Pseudocode is a way to explain an algorithm in a readable form using specific functions.
o An algorithm uses a finite set of instruction to carry out a particular task.	o Pseudocode does follow any specific set of rule.
o Algorithm does not use specific instructions and functions.	o Pseudocode uses conditionals, loops and functions such as, if, end if, read, display etc.