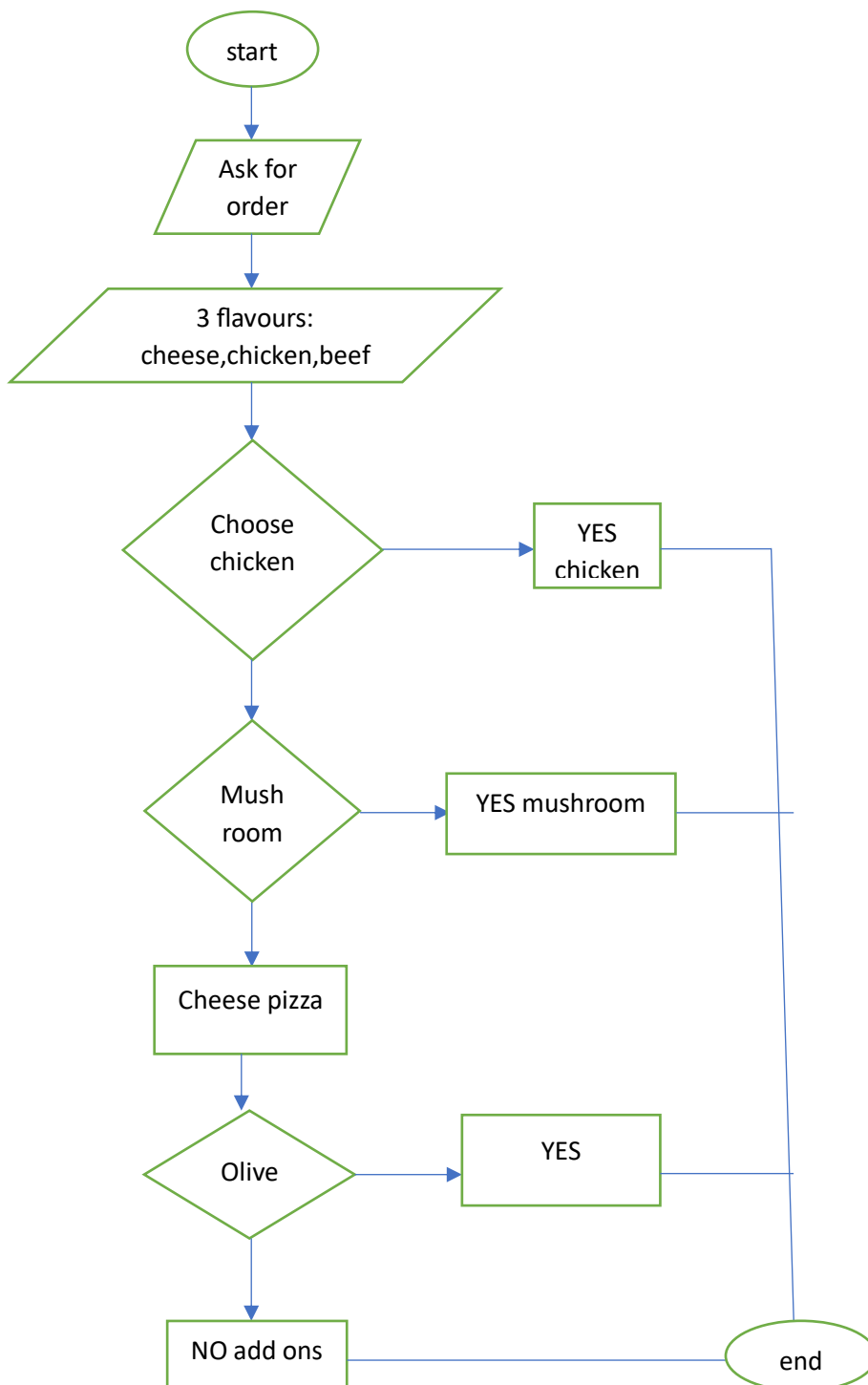# 1.Designing a restaurant

Algorithm

1. Ask the customer for their order
2. Selection between 2 flavours
3. Offer add-ons
4. If customer agrees offer choice between olives or ni
5. Output completed order

Flowchart

```
                    ┌─────────┐
                    (  start  )
                    └────┬────┘
                         │
                    ┌────▼────┐
                   /  Ask for /
                  /   order  /
                  └────┬─────┘
                       │
              ┌────────▼─────────┐
             /   3 flavours:      /
            /  cheese,chicken,beef/
            └─────────┬───────────┘
                      │
                 ◇────────◇            ┌──────────┐
                 │ Choose  │──────────▶│   YES    │
                 │ chicken │           │ chicken  │
                 ◇────┬────◇           └────┬─────┘
                      │                      │
                 ◇────────◇       ┌──────────────┐
                 │  Mush   │──────▶│ YES mushroom │
                 │  room   │       └──────┬───────┘
                 ◇────┬────◇              │
                      │                   │
              ┌───────▼──────┐            │
              │ Cheese pizza │            │
              └───────┬──────┘            │
                      │                   │
                 ◇────────◇     ┌──────────┐
                 │  Olive  │────▶│   YES    │
                 ◇────┬────◇     └────┬─────┘
                      │               │
              ┌───────▼──────┐    ┌─────────┐
              │  NO add ons  │───▶(   end   )
              └──────────────┘    └─────────┘
```

Pseudocode

START

PRINT "available flavours are chicken,cheese and mushroom"

    IF chicken is TRUE THEN

        SET Order as chicken

    ELSE

        Cheese is TRUE THEN

            SET Order as cheese

    ELSE SET order as mushroom

PRINT "do you want olives as an add on?"

    IF olives is TRUE THEN

        SET Order as order & olives

    ELSE

PRINT order

END

2.At the bank

Algorithm

- Start
- Request input for account id
- If account is valid ask for deposit amount
- Update balance statement according to the deposit amount
- End

Pseudocode

START

INPUT accountid
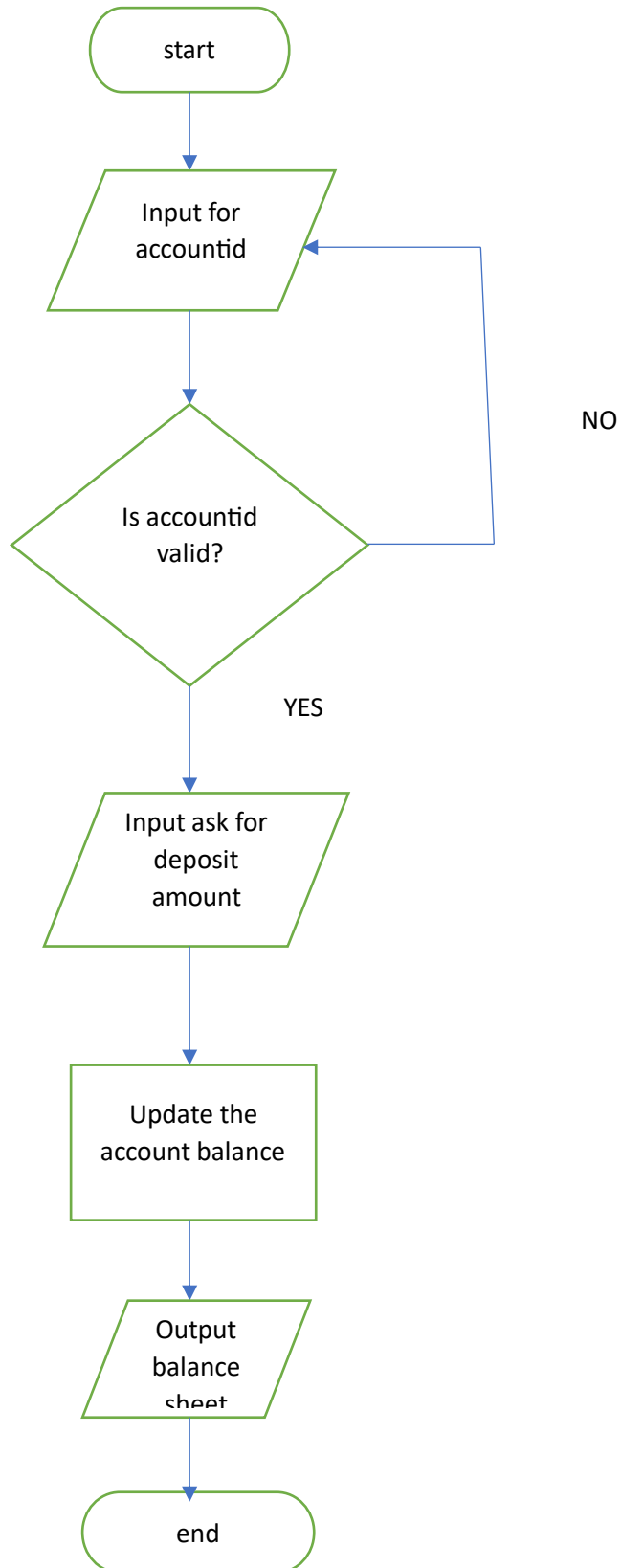
IF accountid is valid THEN

INPUT deposit

SET deposit

UPDATE accountbalance

PRINT BALANCE STATEMENT

END

Flowchart

```
                start

          Input for
          accountid                    <──┐
                                          │ NO
          Is accountid ───────────────────┘
             valid?

             YES

          Input ask for
            deposit
            amount

          Update the
        account balance

            Output
            balance
            sheet

              end
```
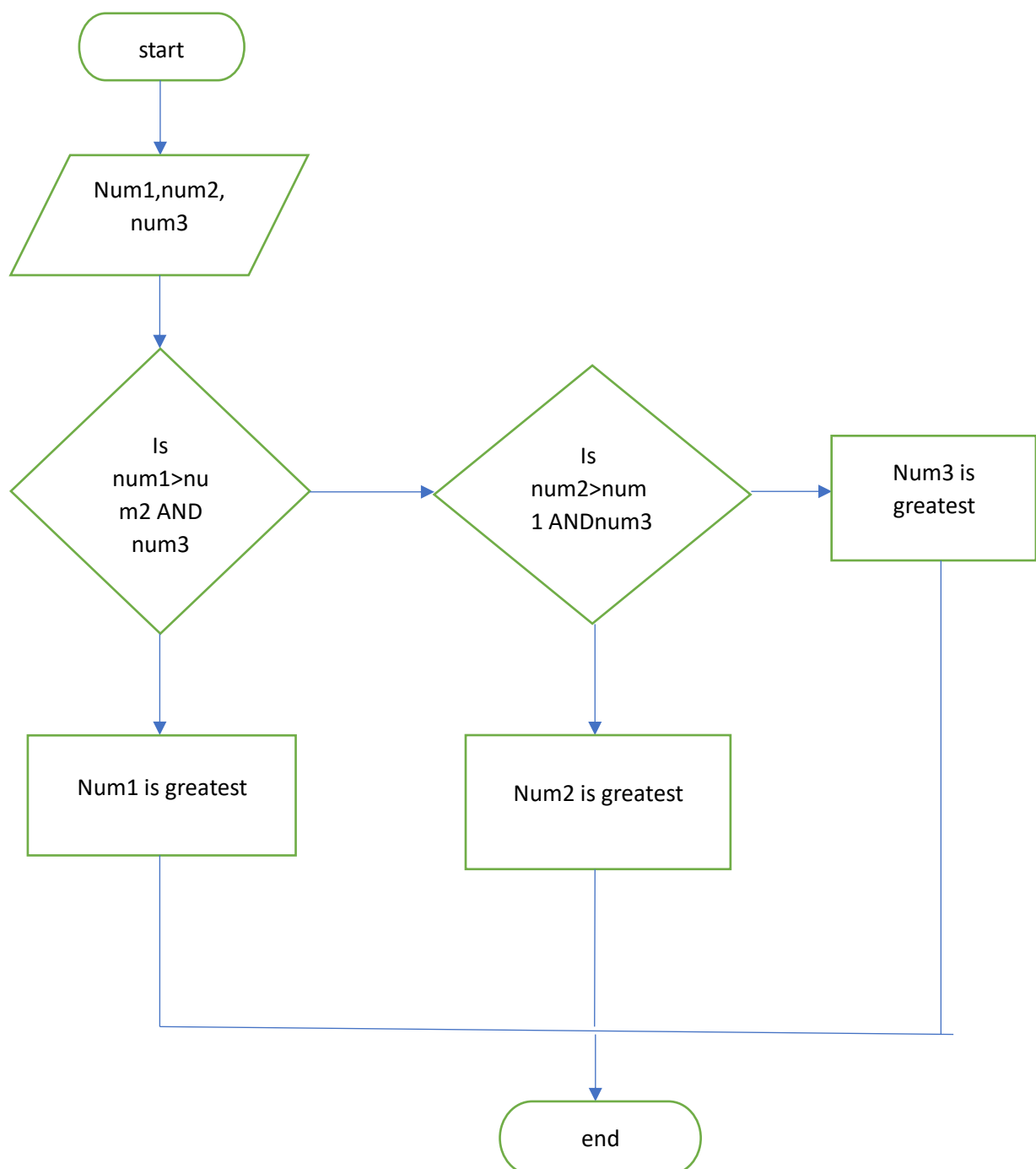
3. Greatest number

Algorithm

- Declare number variables as integers
- Compare numbers
- If num1 is greater than both other numbers then it is the greatest
- If num2 is greater than both other numbers then it is the greates
- Otherwise num3 is the greatest
- Output the greatest number

Flowchart

```
                    ┌──────────┐
                    │   start   │
                    └──────────┘
                         │
                         ▼
                   ╱─────────────╲
                  │  Num1,num2,   │
                  │     num3      │
                   ╲─────────────╱
                         │
                         ▼
              ◇                      ◇                    ┌──────────┐
             Is                     Is                    │  Num3 is  │
          num1>num2 AND  ────▶   num2>num1 AND  ────▶     │  greatest │
            num3                   num3                   └──────────┘
              ◇                      ◇                          │
              │                      │                          │
              ▼                      ▼                          │
       ┌──────────────┐      ┌──────────────┐                   │
       │ Num1 is       │      │ Num2 is       │                  │
       │ greatest      │      │ greatest      │                  │
       └──────────────┘      └──────────────┘                   │
              │                      │                           │
              │                      ▼                           │
              │               ┌──────────┐                       │
              └──────────────▶│    end    │◀─────────────────────┘
                              └──────────┘
```

Pseudocode

START

INPUT num1

INPUT num2

INPUT num3

IF num1> num2 AND num3 THEN

      SET greatest as num1

ELSE num2> num1 AND num3 THEN

      SET greatest as num2

ELSE

      SET greatest as num3

PRINT greatest

END

4. Months

Algorithm

- Assign a number for every month
- 1:January
- 2:February
- 3:March
- 4:April
- 5:May
- 6:June
- 7:July
- 8:August
- 9:September
- 10:October
- 11:November
- 12:December
- Ask for input of month from user
- Output the corresponding number according to the inputted number

5.Simple calculator

Pseudocode

START

INPUT integer

PRINT "addition or subtraction?"

INPUT choice

IF choice is addition THEN
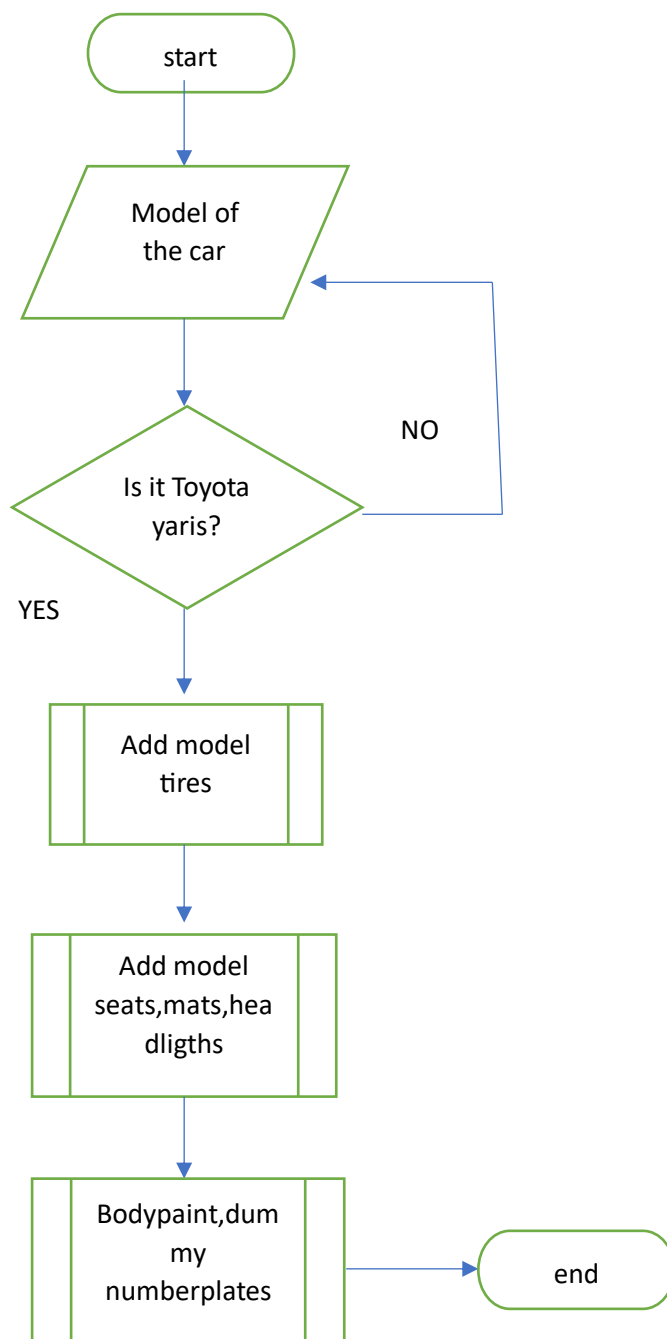
       SET Answer as Num1 + num2

ELSE

       SET answer as num1 – num2

PRINT answer

6.Pipeline assembly

Flowchart

```
                    start
                      |
                      v
              ┌───────────────┐
             /  Model of       /
            /   the car       /  <─────┐
           └───────────────┘          │
                      |               │
                      v           NO  │
                   / \                │
                  /   \               │
          Is it Toyota ──────────────┘
                  yaris?
                   \   /
                    \ /
     YES             |
                     v
            ┌┌─────────────┐┐
            ││ Add model   ││
            ││ tires       ││
            └└─────────────┘┘
                     |
                     v
            ┌┌─────────────┐┐
            ││ Add model   ││
            ││ seats,mats,hea││
            ││ dligths     ││
            └└─────────────┘┘
                     |
                     v
            ┌┌─────────────┐┐
            ││ Bodypaint,dum││ ───────>   end
            ││ my          ││
            ││ numberplates││
            └└─────────────┘┘
```

7. complexer calculator

- Ask for input of numbers
- Offer choice between +,-,*,/
- Assign values 1 to 4 for the operators respectively
- Perform operation accordingly to the input

8.Done on Github

9. Purpose of .gitignore files

To ensure that certain files that are untracked remain untracked by Git

10. difference between algorithm and pseudocode

Algorithms are set of instructions on how to solve a problem whereas a pseudocode is organize and understand a problem before it is coded. Algorithms are more specific compared to pseudocodes.