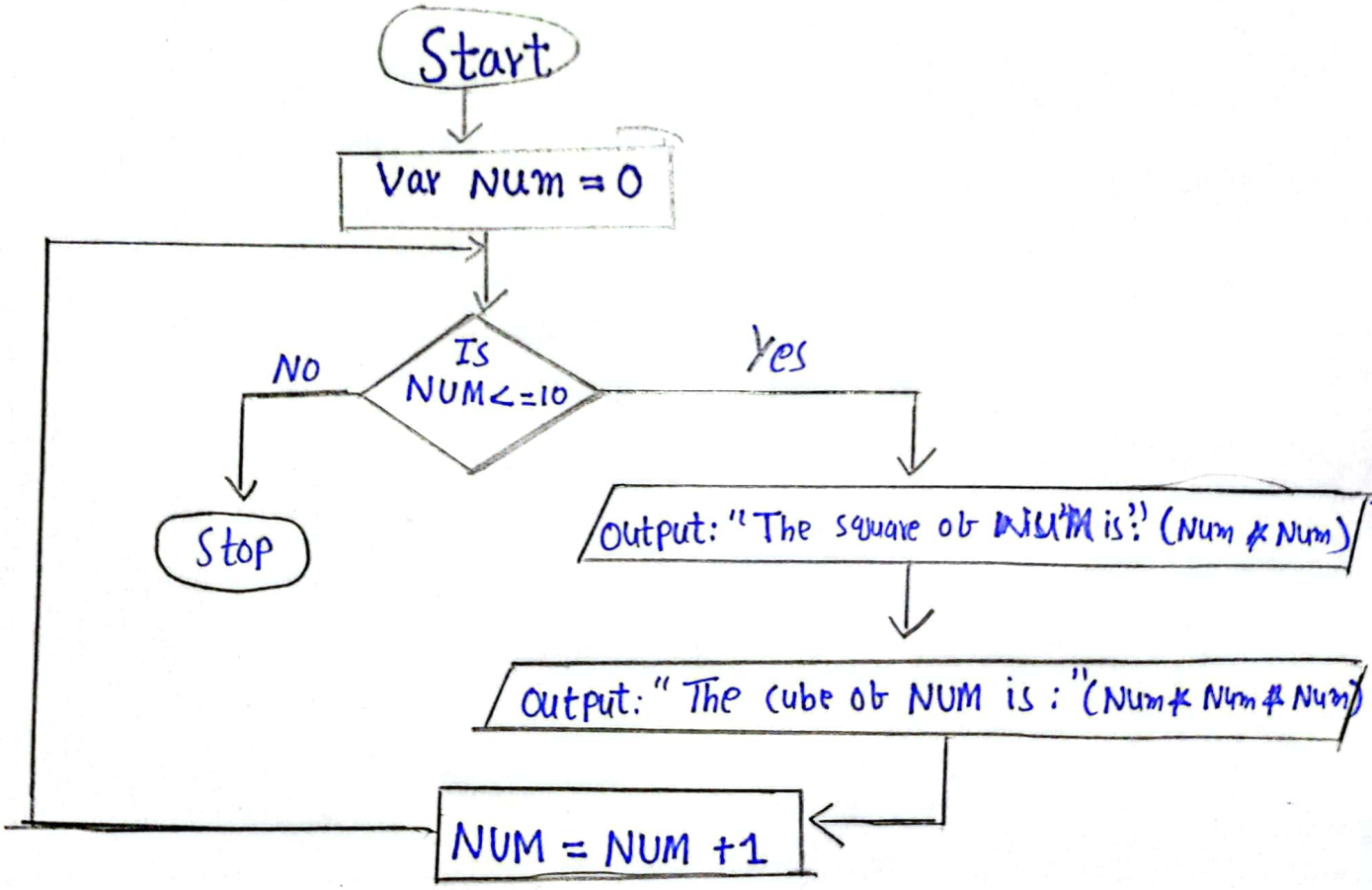
Q1)

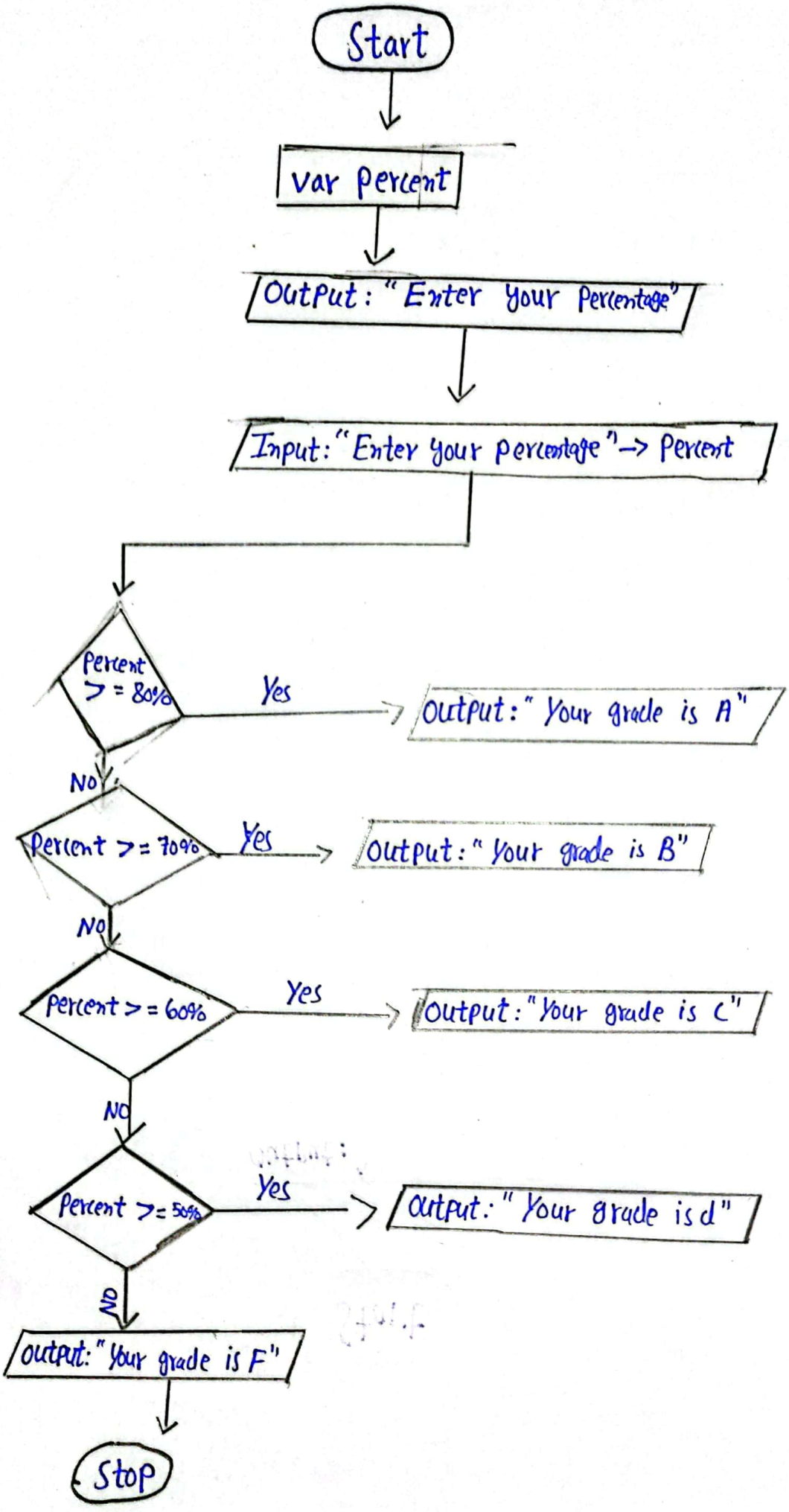
# Pseudocode:

① Start by creating a variable called "NUM".
② Set the initial value of NUM to zero.
③ Show the message "The Square of Num is " ← ~~Num multiplied~~ NUM multiplied by Num.
④ Show the message "The cube of NUM is" ← NUM multiplied by NUM multiplied by NUM.
⑤ Increase the value of NUM by one.
⑥ Go back to Steps 3 and 4.
⑦ Repeat steps 3, 4, 5, and 6 until the value of NUM is less then or equal to "10".
⑧ Stop.

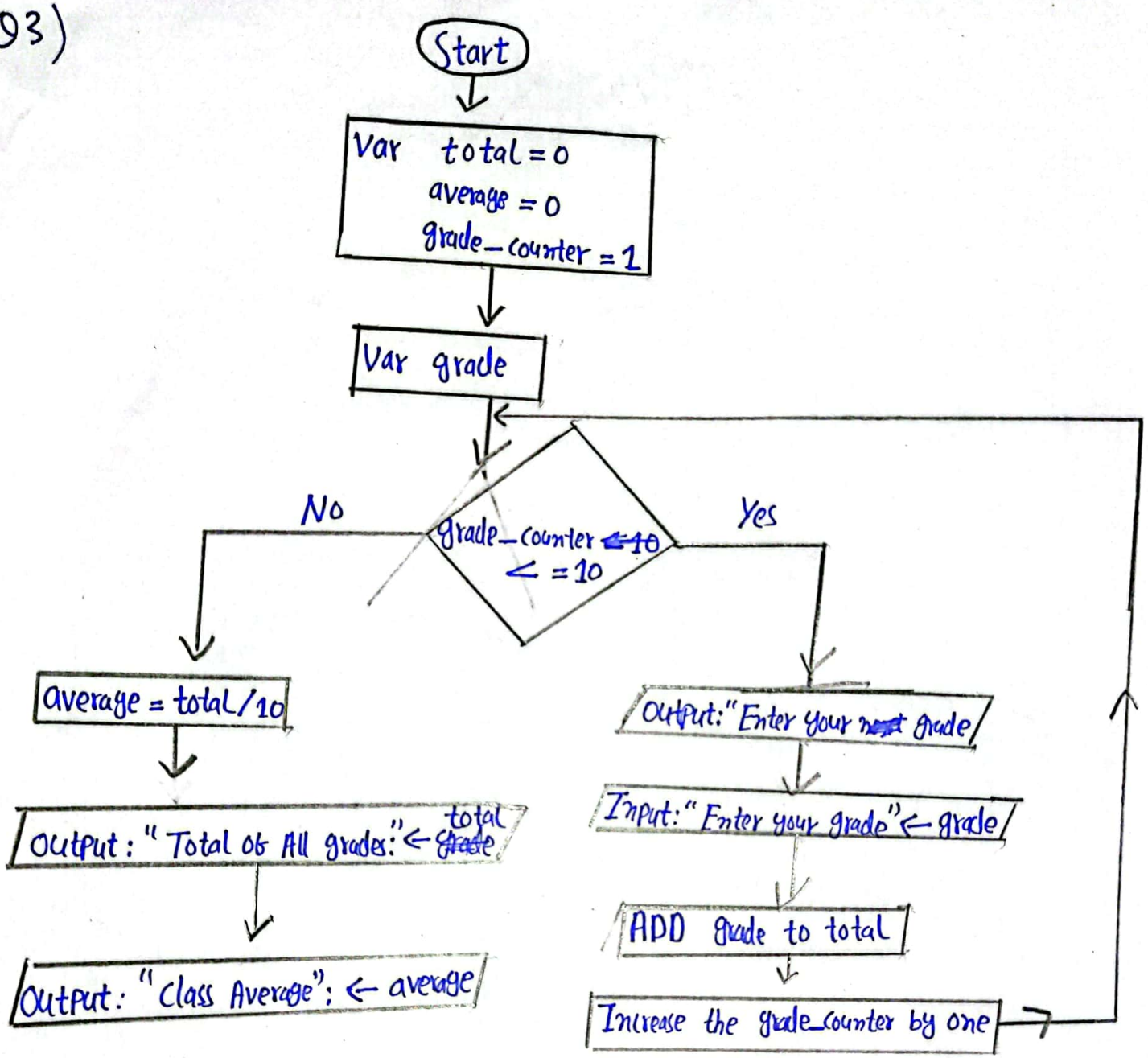
# FlowChart



Q2) Flowchart



03)


Start
Var total = 0
average = 0
grade_counter = 1
Var grade
grade_counter <= 10
No
Yes
average = total/10
Output: "Total of All grades:" ← total
Output: "Class Average": ← average
Output: "Enter your grade"
Input: "Enter your grade" ← grade
ADD grade to total
Increase the grade_counter by one

Q4) Pseudocode

1. Start by asking the user to enter a word
2. Count how many letters are in the word.
3. If the word has an even number of letters;
   - Check if the first letter is the same as the last letter.
   - 2nd letter is same as the 2nd last letter same for 3rd, 4th and so on.
   - Depending upon how many letters are in the words
   - If they are the same, Show "it's a palindrome"
   - If they are different, show "it's not a palindrome"
4. If the word has an odd number of letters
   - Find the letter in the middle of the words
   - Split the word into two halves, excluding the middle letter
   - Check if the first half is the same as the second half when reversed.
   - If they are the same, Show "It's a palindrome".
   - If they are different, show "It's not a palindrome".
   - Stop

Q5) Pseudocode

1. Start by declaring a variable named "NUM".
2. Show the message "Please enter a number".
3. Accept and store the user's input value in the "NUM" variable.
4. Check if the value stored in "NUM" is less than 2.
5. If it's less than 2, display the message "This is not a prime number"
6. If the value is greater than 2, perform modulo (%) operation on the number from 2 to the number itself (inclusive).
7. If the value is equal 2, Show the message "This is a prime number
8. If any of these modulo operations result in zero, Show the message "This not a prime number".
9. If none of the above conditions are met,
   - Show the message "This is a prime Number".
10. Stop

96)

| Engine | Count | Number | Size | Average | Output |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 3 | | |
| 3 | 1 | 1 | 2 | | |
| 5 | 2 | 2 | 1 | | |
| 6 | 2 | 3 | 5 | | |
| 11 | 3 | 4 | 0 | | |
| 11 | 3 | 5 | -1 | | |

To stop the flow chart and obtain the output we need to put size = -1

| Engine | Count | Number | Size | Average | output |
|---|---|---|---|---|---|
| 11 | 3 | 5 | -1 | 2.2 | 2.2,3 |