Assignment 4.1

2.2 Describe the syntax of the if statement in c++.

=>

```
if (condition)
{
    // code to be executed if the condition is true
}
```

2. Provide an example of using the if statement to check a condition

=>

```
#include <iostream>

int main(){
    int number = 10;

    if (number % 2 == 0){
        std::cout << number << " is even.";
    }
```

=> we use the '%' operator which computes the reminder of dividing 'number' by '2' if the remainder is '0' it means the number is even.

=> inside the 'if' statement we check if 'number % 2' is equal to '0'. if it is true, we find that the number is even.

Q.3 Describe the syntax of the if-else statement

=>
```
if(condition)
  {
    // code to be executed if the condition is
       true
  }
else
    {
      // code to be executed if the condition is
      false
  }
```

Q.4 Provide an example illustrating the use of if-else in program.

=>
```
# include <iostream>
  int main() {
        int number = 6;

  if (number % 2 == 0 {

      std:: cout << number << " is even." << std::
                                          endl;

  }
else {
   std:: cout << number << " is odd." << std::
  }
}
```

Teacher's Signature.....

=> we store the "6" in the variable 'num'

=> we use the 'if' statement to check if the reminder of dividing 'number' by '2' is '0' if it is then the number is even and we print that.

=> if the remainder is not '0' we use 'else' block to print that the number is odd.

5. State an example illustrating the use of ladder if else in a program withe desc the syntax.

->
```
#include <iostream>

int main() {

    int num = 8

    if (num > 0) {

    Std:: cout << num << " is positive."

    }
    else if ( num < 0 ) {

    Std:: cout << num << " is negative"

    } else {
    Std:: cout << num is zero
```

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=> We declare an integer variable 'number'

- We use the if statement to check if number is grater than '0' if it is we print that it's positive.

- if the number is not greater than '0' we use 'else if' to check if is less than '0' if it is we print that it is negative.

- if the number is neither grater than nor less than '0' we use else to print that it's zero.