

# Answer

## 1.. *What is the difference between C & C++ ?*

- ☐ C is a procedural programming language, while C++ is a procedural & object-oriented programming language.

// C++ is an object-oriented programming language, so it revolves around objects. For example:

```
#include <iostream>
class Greeter {
    public:
        void greet() {
            std::cout << "Hello, World!";
        }
};
int main() {
    Greeter greeter;
    greeter.greet();
    return 0;
}
```

// C is a procedural language, so the program revolves around functions. For example:

```
#include <stdio.h>
void greet() {
    printf("Hello, World!");
}
int main() {
    greet();
    return 0;
}
```

- ☐ C++ is OOP - class, objects - easy to relate with the external world & solve problems. E.g. Game - player - enemy.

- ☐ C++ is `secure` than C, because of `data hiding` - we have `access specifiers` (`private`, `protected` & `public`)
- ☐ C++ is `secure` than C, because of `data hiding` - we have `access specifiers` (`private`, `protected` & `public`)
- ☐ C++ also provides - `inheritance`, `polymorphism`, `encapsulation`, `abstraction`, `operator overloading`, `constructors`, etc.
- ☐ C++ is a `generic` programming language - STL.

## 2.. *What is the namespace in C++?*

- [ ] If there are ``two`` or more functions with the ``same name`` defined in ``different`` libraries then how will the compiler know which one refers to? Hence, we put those functions, classes, and objects under a ``name``.

### **Imagine this..**

Imagine you have two friends named Alex. One Alex is good at math, and the other Alex is good at science. If you just say, "I will ask Alex for help," it's confusing. Which Alex are you talking about?

In programming, it's the same. If two libraries have a function with the same name, the computer gets confused. It doesn't know which one you want to use. So, we use something called a **namespace**. It's like a last name for functions.

So, if you have two functions named `help()` in two different libraries named `Math` and `Science`, you would call them as `Math.help()` and `Science.help()`. Now, the computer knows exactly which `help()` you're talking about. It's like saying, "I will ask Math Alex for help" or "I will ask Science Alex for help."