

constexpr and consteval functions

```
/*  
    . constexpr and consteval functions  
    . constexpr function:  
        . Can be evaluated at compile time or runtime, depending on how it is used.  
          If all inputs are constant expressions, it is evaluated at compile time;  
          otherwise, it is evaluated at runtime.  
  
    . consteval function:  
        . Must be evaluated only at compile time. If called in a context that cannot  
          guarantee compile-time evaluation, it results in a compilation error.  
*/
```

constexpr and consteval functions



```
// Marking a function as constexpr gives it the potential
// to be evaluated at compile time

export constexpr int get_value(int multiplier) {
    return 3 * multiplier;
}
```



```
// Evaluate this function at compile time. If you can't
// do that throw a compiler error
export consteval int get_value(int multiplier) {
    return 3 * multiplier;
}
```

constexpr and consteval functions

```
// For the evaluation to take place at compile time, we have
// to remember to store the return value in a constexpr result variable.

constexpr int result = get_value(4); // Compile time
print_number(result);

/*
int some_var{5}; // Run time variable
int result = get_value(some_var); // Run time
print_number(result);
*/
```