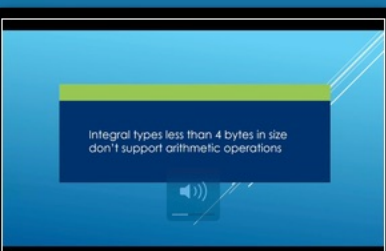


# Weird Integral Types

Integral types less than 4 bytes in size  
don't support arithmetic operations



char

short int



```
short int var1 {10};  
short int var2 {20};
```

```
char var3 {40};  
char var4 {50};
```

```
std::cout << "size of var1 : " << sizeof(var1) << std::endl;  
std::cout << "size of var2 : " << sizeof(var2) << std::endl;  
std::cout << "size of var3 : " << sizeof(var3) << std::endl;  
std::cout << "size of var4 : " << sizeof(var4) << std::endl;
```

```
auto result1 = var1 + var2 ;  
auto result2 = var3 + var4;
```

```
std::cout << "size of result1 : " << sizeof(result1) << std::endl;  
std::cout << "size of result2 : " << sizeof(result2) << std::endl;
```

```
short int var1 {10};  
short int var2 {20};
```

```
char var3 {40};  
char var4 {50};
```

```
std::cout << "size of var1 : " << sizeof(var1) << std::endl;  
std::cout << "size of var2 : " << sizeof(var2) << std::endl;  
std::cout << "size of var3 : " << sizeof(var3) << std::endl;  
std::cout << "size of var4 : " << sizeof(var4) << std::endl;
```

```
auto result1 = var1 + var2 ;  
auto result2 = var3 + var4;
```

Conversion to int

```
std::cout << "size of result1 : " << sizeof(result1) << std::endl;  
std::cout << "size of result2 : " << sizeof(result2) << std::endl;
```



The same behavior is present on other operators like bitwise shift operators (  $\gg$  and  $\ll$  ).