

CS 201 Q & A

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Casting between char and int

Q: Is it possible to cast int to char and vice versa?

```
#include <stdio.h>
int main(void){
    char ch = 'A';
    int num = 65;
    printf("Integer > %d\n", (int)ch);
    printf("Character > %c\n", (char)num);
    return 0;
}
```

Output:

```
Integer > 65
Character > A
```

Representation of int type

Q: In the text book, it has been written that the range of type `int` is `-32,767 ...32,767`. What if the number we are trying to represent is bigger than this range?

A: ANSI C standard specifies that the minimum range of type `int` is `-32,767 ...32,767`. Actual ranges varies depending on different implementations and architectures. We can find the range of `int` data type in the C implementation we are using in our lab by executing the code in the next slide.

Representation of int type

```
#include <stdio.h>
#include <limits.h>
int main(void){
    printf("Integer range > %d to %d\n", INT_MIN, INT_MAX);
    printf("Bigger than Integer!!! %d\n", INT_MAX + 2);
}
```

Output:

```
Integer range > -2147483648 to 2147483647
Bigger than Integer!!! -2147483647
```

- Note that whenever we try to assign a number to a `int` type, that exceeds the range of integer, the contents become garbage.