bouns

ORIGINAL CODE:

```
#include <stdint.h>
#include <stdio.h>

unsigned int ui = 0;
unsigned short us = 0;
signed int si = -1;

int main()
{
    int64_t r1 = ui + si;
    int64_t r2 = us + si;
    printf("%ld %ld\n", r1, r2);
}
```

RESULT:

```
4294967295 -1
```

6.3 Conversions

> If an int can represent all values of the original type (as restricted by the width, for abit-field), the value is converted to an int; otherwise, it is converted to an unsignedint. These are called the integer promotions.58) All other types are unchanged by theinteger promotions.

Thus, we can know when the program calculate the "unsigned int + signed int", it will be promote to "unsigned int + unsigned int", and if we present "si" in binary number, it will become 11111111111111111111111111111111(2), and if it be promote to unsighed int, it value will be 2^31. Therefore, r1 = 2^31 + 2^31 = 4294967295.

Besides, when calculate r2, us will be promote to "int", and us will become 0. Therefore, r2 = 0 + -1 = -1.