

## Seventh: Conversion to Two's Complement Representation (10 points)

In this part, your task is to write a C program that prints the two's complement binary representation of a number with a specific number of bits. The argument to the program is an input file, whose format is described in the input format. If a given number is not representable with a given number of bits because the number is greater than largest positive value possible with the given number of bits, then you should print the representation for the largest positive value with the given number of bits in the two's complement representation. If a given number is not representable with a given number of bits because is smaller than smallest negative value with the given number of bits, then you should print the representation for the smallest negative with the given number of bits in the two's complement representation.

**Input-Output format:** Your program will take one file name as its command-line input. Each line in the input file will have two integers separated by a space: an integer that you want to represent in binary and the number of bits to use for the representation. For each line in the input, you should print out the binary representation of the number followed by a newline character.

### Example Execution:

Let's assume we have the following input file:

```
input.txt
42 7
16 4
-9 4
```

When you execute the program, the result should be:

```
$/seventh input.text  
0101010  
0111  
1000
```

We will not give you improperly formatted files. You can assume all your input files will be in proper format, as stated above.