CO222: Programming Methodology
Lab: 03

Command Line Binary Converter

In this lab, you are expected to build a command line tool for binary conversion. The converter should take inputs as command line arguments and produce outputs to the standard output (STDOUT). The tool should take three arguments as shown below (assuming that the tool is going to be called **binconvert**):

```
./binconvert -<input format> -<output format> <input>
```

Input/output format can be one of the followings:

Format	Description
B	A 32-bit binary representation
H	An 8-digit hexadecimal representation
I	Integer
F	Single Precision Floating Point Number

Following are some example runtime scenarios:

```
./binconvert –H –B ABCD0000
10101011110011010000000000000000
```

```
./binconvert –I -H -125
0xFFFFFF83
```

```
./binconvert –F –H 0.75
0x3F400000
```

```
./binconvert –B –F 00111111010000000000000000000000
0.75
```

```
./binconvert –H –F 3F400000
0.75
```

```
./binconvert –B –H 00000000000000000000000100100011
0x00000123
```

```
./binconvert –I –F 125
125.00
```

```
./binconvert –F –I 125.15
125
```

When there is a mistake in the inputs such as in the following examples, a “usage” message should be printed and the program should terminate by returning a 1 (EXIT_FAILURE).

```
./binconvert
Usage: ./binconvert -<input format> -<output format> <input>
```

```
./binconvert –B –H
Usage: ./binconvert -<input format> -<output format> <input>
```

For this exercise, you SHOULD NOT use any existing converters from the library functions or otherwise. Submit your program (named E16xxxbinconvert.c) before the deadline.