DS 221 **Assignment 1** **due 18/Aug/2022**
(2 marks)

1. Calculate how many times this C loop will iterate. Assume that C float variables are represented using the 32 bit IEEE 754 Floating Point Standard representation.

```
float f=1.0;
while (f != 0.0) f = f / 2.0;
```

2. Prove that the C shift operator << (>>) can be used to multiply (divide) a 32 bit unsigned int by powers of 2. Does this idea also work for 32 bit signed ints represented using 2s complement representation? If not, show a counterexample.

Submission: Submit your answers before midnight on the due date by uploading to Teams a single PDF file containing your answers to both questions. The name of the file should be of the form Assg1Firstname.pdf. For example, in my case the file name would be Assg1Matthew.pdf