2. [8 marks] What will be the output of the following program?

```c
#include <stdio.h>

int main() {
    int x, y, i;
    unsigned int z;
    char xc, yc;
    unsigned char zc;
    float f1 = 1, f2 = 0, f3;

    for (i = 0; i < 100; i++) f2 += 1.0/100;
    if (f1 == f2) printf("f1 and and f2 are equal\n");
    else printf("f1 and f2 are different\n");
    f1 = 1e30; f2 = 1e-30;
    f3 = f1 + f2;
    if (f3 == f1) printf("f1 and f2 are equal\n");
    else printf("f1 and f2 are different\n");
    xc = 0x81; x = xc;
    printf("x is: %x\n", x);
    zc = 0x81; z = zc;
    printf("z is: %x\n", z);
    x = -14;
    printf("x in hex is %x\n", x);
    printf("x in octal is %o\n", x);
    zc = -14;
    if (14 < zc) printf("14 is less than -14\n");
    else printf("14 is greater than or equal to -14\n");
    printf("zc >> 1 is: %d\n", zc >> 1);
    printf("-14 >> 1 is: %d\n", (-14) >> 1);
    printf("-14 << 1 is: %d\n", (-14) << 1);
}
```

Line 1: __different__

Line 2: __equal__

Line 3: __ffffff81__

Line 4: __81__

Line 5: __fffffff2__

Line 6: __37777777762__

Line 7: __14 is less than -14__

Line 8: __121__

Line 9: __-7__

Line 10: __-28__