Sample Assignment 1B, 2020-09-10

Total time: 12 minutes. Write your solutions on the handout in free spaces.

Question 1 (Bitwise Operations). Consider the following variable assignments:

```
long long int a = -6;
long b = 0347;  // Reminder: Octal notation starts with "0"
char c = '\t';  // TAB character
```

Draw the memory content of these variables in *hexadecimal notation*. Ensure that the hex notation length equals their actual length. You may need to add leading zeroes.

Memory content of `a`: _____

Memory content of `b`: _____

Memory content of `c`: _____

Question 2 (Flowchart). Draw a flowchart that shows how the following `do-while` loop is evaluated. Please draw the flowchart nodes accurately: Use only 5 kinds of nodes:
(1) Start node (oval: one outgoing arrow).
(2) Stop node (oval: one incoming arrow).
(3) Conditional statement (diamond: one incoming and two outgoing arrows). Also mark the branch taken on `true`.
(4) Regular statement (rectangle: one incoming and one outgoing arrow).
(5) Merging two branches (black dot: two incoming arrows, one outgoing arrow).

```
i = 17;
do
{
    i = g(i);
    if (cond_1(i)) { break; }
    if (cond_2(i)) { continue; }
    i = h(i);
}
while (cond_3(i));
```