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 `switch-case` statement 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).

```
int a = 0;
char c;
cin >> c;
switch( c ) {
    case 'A':
        a += 1;
    case 'B':
        a += 2;
                break;
    default :
        a += 4;
}
```