CCA - 1 - Div A - Nov 2, 2022
Time: 330 - 415p
==== Solve all 4 pbs =========

1. Given an array declaration - int arr[10];
a) explain with diagram, the memory layout in which arr is represented
b) explain - what will happen when the code uses arr[11], an index that is out of bounds
For (b) - write your answer in 2-3 statements

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2. Declare an array of integers and initialize the array with 5 integers, for example, 10, 20, 30, 40, 50. Write a code that then doubles each array element
- [ ] Write only the main() function
- [ ] You can use your own numbers to initialize the array
- [ ] Use printf() to output the modified array

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3. Given the following code snippet -
int x = -10;
1. Declare 2 int pointer variables named pX1 and pX2
2. Make both pX1 and pX2 point to x
3. Use pX1, add (+10) to x
4. Use pX2, add (-20) to x
5. What would the value of x now?
- [ ] Explain your answer in 2-3 sentences

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4. Given the following C program -

```
        void funcA(int a)  {
    funcB(a);
}

void funcB(int b) {
    funcC(b);
}

void funcC(int c) {
    int l;

        l = c;

    return;
}

        int main(void) {
    funcA(10);
}
```

If the debugger is stopped at the line “l = c;” inside funcC() -
- [ ] Draw the chain of call stacks.
- [ ] For every frame on the call stack, show the variable usage

- [ ] In 1 para, explain your understanding of the function calls mechanism in C