MIDT	ERM	OF	CS	135,	v2
Mar	18,	202	4		

Name:					
EmpID:					

1 (3	30 ı	points)	Answer	\mathbf{the}	following	questions.
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(1)	Given string arr[] = {"Hello", "Hi", "Hey"}, what is arr[1]?
(2)	Declare function insert , for an given array arr of integers, an integer called size , which represents the number of elements in the array, and an integer capacity , which represents the capacity of the array, and an integer called element . If size is smaller than capacity , insert element to the end of the array and increase the original size by 1, otherwise, do nothing. Return type is void. Just write function header.
(3)	Write a statement to generate a random int in [-10, 50]. No need to include libraries.
(4)	Given string greeting = "memory"; What is the value for greeting.substr(2, 3)?
(5)	What is the value of 1.0 / 2 * 5?
(6)	Suppose n is 135, what the value of foo(n)?
	<pre>int foo(int n) { int result = 1; do { result *= n % 10; n /= 10; } while (n != 0);</pre>
	<pre>return result; }</pre>

W	That is the output of the following code?
//	include <iostream></iostream>
	sing namespace std;
'n	t main() {
	<pre>int count = 0;</pre>
	for (int $i = 2$; $i \ge -1$; $i = 2$)
	count++;
	17
	<pre>cout << count << endl; roturn 0:</pre>
}	return 0;
'	
W	That is the output for the following code?
//	include <iostream></iostream>
	sing namespace std;
VC	oid foo(int& a, int b);
'n	t main() {
	int i = 2;
	int j = 6;
	foo(i i).
	foo(i, j);
	cout << "i = " << i << ", j = " << j << endl;
	return 0;
}	
VC	oid foo(int& a, int b) {
	a++;
	b*=2;
}	
W	Trite a condition to represent that char variable ch is none of the following: '1', '2', or '3'.
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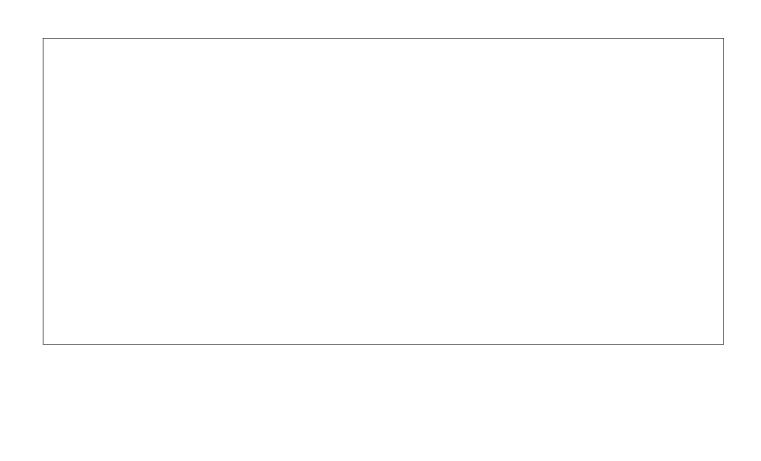
2 (20 points) Answer the following questions.

(1) What is the output of the following code?

```
#include <iostream>
   #include <string>
   using namespace std;
   void show(int height, int width);
6
   int main() {
7
       show(4, 6);
8
       return 0;
9
   }
10
11
   void show(int height, int width) {
12
       for (int row = 0; row < height; row++) {</pre>
13
            for (int col = 0; col < width; col++)</pre>
14
                if (row \ge height/2 \&\& col \ge width/2)
15
                   cout << "*";
16
                else cout << "-";
17
18
            cout << endl;</pre>
19
       }
20
   }
21
```

(2) Define function all_small_letters, for an array of chars, return true if all its elements are smaller letters ('a' to 'z'), otherwise, return false. No need to include libraries or define main function.

Hint: you may use int islower(int ch) to test whether a character is lower letter or not.



(50 points) Programming exercises

	0, the return is						
In mair	function deal	oro orrow orr	with values	1 2 1 2 1) and call th	a above fune	tion on orr
	n function, decl ırn. Just writ						
					,		

2)	Write code in main to enter strings (may contain spaces) until user enter "exit". Tally how many string ha odd number of characters.
	Here is a sample input/output. Enter a series of strings until enter "exit" is a prompt. String tr has odd length.
	Enter a series of strings until enter "exit" No, no try
	ABC DE exit number of odd strings: 1
(number of odd strings. 1