

Strings

Exercises

CS185

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For these exercises, you can assume that the sizes of the data types (in bytes) are as follows: char = 1, short = 2, int = 4, float = 4, double = 8. You may also assume that pointers are 4 bytes.

- Given these valid declarations, determine the value of each expression below. If an expression is undefined, write **UNDEF** on the line

```
char a[] = "Hello";
char b[] = {'H', 'e', 'l', 'l', 'o'};
char c[] = {'H', 'e', 'l', 'l', 'o', '\0'};
char *d = "Hello";
```

Expression	Value
sizeof(a)	
sizeof(b)	
sizeof(c)	
sizeof(d)	
strlen(a)	
strlen(b)	
strlen(c)	
strlen(d)	

- What does the following code print out?

Code

```
char string[] = "IJnvcB";
int length = strlen(string);
int i = 0;

for (; i < length; ++i)
{
    string[i] += (i * 2) % 3;
}

std::cout << string << std::endl;
```

Answer	
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3. What does the following code print out?

Code	<pre>int i = 0; char *p = "Heallelkjfo"; while (*p) { putchar(*p); ++i; p += i; } putchar('\n');</pre>
Answer	

4. What does the following code print out?

Code	<pre>char s1[10] = { 'H','e','\0','l','l', '\0', 'o', '\0' }; char s2[10]; strcpy_s(s2, s1); puts(s2);</pre>
Answer	

5. What does the following code print out?

Code	<pre>char str[25] = "Hello"; strcat_s(str, " C"); puts(str);</pre>
Answer	

6. What does the following code print out?

Code	<pre>char str[25] = "Hello"; strcpy_s(&str[2], 23, " C"); puts(str);</pre>
Answer	

7. What does the following code print out?

Code	<pre>char str[25] = "Hello"; char *str2 = "Hello"; if (strcmp(str, str2) == 0) { std::cout << "They are equal"; } else { std::cout << "They are not equal"; }</pre>
Answer	

8. What does the following code print out?

Code	<pre>char str[25] = "Hello C"; char *str2 = "Hello"; if (strcmp(str, str2) == 0) { std::cout << "They are equal"; } else { std::cout << "They are not equal"; }</pre>
Answer	