Strings

Exercises

CS185

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.

1. 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)	

2. 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;
``` |

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Answer	

3. What does the following code print out?

| Code | ```int i = 0;
char *p = "Heallelkjfo";

while (*p)
{
        putchar(*p);
        ++i;
        p += i;
}

putchar('\n');``` |
|---|---|
| **Answer** | |

4. What does the following code print out?

| Code | ```char s1[10] = { 'H','e','\0','l','l', '\0', 'o', '\0' };
char s2[10];

strcpy_s(s2, s1);
puts(s2);``` |
|---|---|
| **Answer** | |

5. What does the following code print out?

| Code | ```char str[25] = "Hello";
strcat_s(str, " C");
puts(str);``` |
|---|---|
| **Answer** | |

6. What does the following code print out?

| Code | ```
char str[25] = "Hello";
strcpy_s(&str[2], 23, " C");
puts(str);
``` |
|---|---|
| **Answer** | |

7. What does the following code print out?

| Code | ```
char str[25] = "Hello";
char *str2 = "Hello";

if (strcmp(str, str2) == 0)
{
        std::cout << "They are equal";
}
else
{
        std::cout << "They are not equal";
}
``` |
|---|---|
| **Answer** | |

8. What does the following code print out?

| Code | ```
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";
}
``` |
|---|---|
| **Answer** | |

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