

Studio 3 Pointers

1. Drew Sadler
- 2.
- 3.
- 4.
5. "HELLOWORLD!" , **the variable whose address they store**
6. "H" was printed by itself
- 7.
8.

```
for(int a=0;a<=(sizeof(messagePtr)+1);a++)
{
    printf("%c\n",*(messagePtr + a));
}
```
9.

```
int counter=0;
while(messagePtr[counter]!='\0')
{
    printf("%c\n",*(messagePtr[counter]));
    counter++;
}
```
10.

```
void printReverse( char* string )
{
    int b=0;
    while(string[b]!='\0')
    {
        b++;
    }
    for(int a=b;a>=0; a--)
    {
        printf("%c\n",*(string + a));
    }
}
```
11.

```
char* reverseString( char* input )
{
    //1. First count how many characters are in the input string
    int a=0;
    int c=0;
    while(input[c]!='\0')
    {
        c++;
    }
    int number_of_chars_in_input=c;
```

```
//This creates enough space to store the reversed string, plus one more byte
//for the null terminator
char* output = (char*)malloc( number_of_chars_in_input+1 );
//2. Copy the input string to the output string in reverse order. There are
//multiple ways to do this- consider using a counter, or consider using two
//pointers.
for(int b=number_of_chars_in_input-1;b>=0;b--)
{
    output[a++]=input[b];
}
//REMEMBER THAT YOUR OUTPUT STRING MUST END WITH A NULL
//TERMINATOR. This is not
//provided for you automatically- you must put it there!
output[a]='\0';
return output;
}
```