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EET207
HW 4

1)
`size_t strlen(const char *str)`

Computes the length of the string `str` up to but not including the terminating null character.

This function will return the value which is the length of the string it is passed. So `strlen("Hi")` returns a value of 2. It does not count the terminating character in the length.

`char *strcpy(char *dest, const char *src)`

Copies the string pointed to, by `src` to `dest`.

This takes 2 pointers to strings. It then copies the string from the `src` pointer to the `dest` pointer. So the string `Src = "Start"` and String `dest = "End "`. When `strcpy(*dest, *src)` is called, `Dest` is overwritten and becomes `Dest = "Start"`.

2)

```
#include <stdio.h>
#include <stdlib.h>
#include <math.h>
```

```
int main()
{
    int myNumbers[5];
    int i = 0;
```

```
    printf("Please enter 5 numbers with a space in between each \n");
    scanf("%d %d %d %d %d", &myNumbers[0], &myNumbers[1], &myNumbers[2], &myNumbers[3],
    &myNumbers[4]);
```

```
    for(i=0; i<5; i++){
        if(myNumbers[i] < 0){
            myNumbers[i] = 0;
        }
    }
```

```
    printf("myNumbers = %d %d %d %d %d\n", myNumbers[0], myNumbers[1], myNumbers[2],
    myNumbers[3], myNumbers[4]);
```

```
    return 0;
}
```

3)

```
#include <stdio.h>
#include <stdlib.h>
#include <math.h>

int main()
{
    int myNumbers[3][3];
    int i = 0;
    int f = 0;

    printf("Please enter 3 numbers with a space in between each for row 1\n");
    scanf("%d %d %d", &myNumbers[0][0], &myNumbers[0][1], &myNumbers[0][2] );
    printf("Please enter 3 numbers with a space in between each for row 2\n");
    scanf("%d %d %d", &myNumbers[1][0], &myNumbers[1][1], &myNumbers[1][2] );
    printf("Please enter 3 numbers with a space in between each for row 3\n");
    scanf("%d %d %d", &myNumbers[2][0], &myNumbers[2][1], &myNumbers[2][2] );

    int newMatrix[3][3];

    for(i=0;i<3;i++){
        for(f=0; f<3; f++){
            newMatrix[i][f] = myNumbers[f][i];
        }
    }

    printf("\nTransposed matrix\n");

    for(i=0;i<3;i++){
        for(f=0; f<3; f++){
            printf("%d", newMatrix[i][f]);
        }
        printf("\n");
    }

    return 0;
}
```