QUIZ 10

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Question 1

Source Code:

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

int main(void){

    FILE* fp = NULL;
    int ARRAY_SIZE = 8;
    int evenNums[ARRAY_SIZE];

    printf("Opening file numbers.txt\n");

    fp = fopen("numbers.txt","w");

    if(fp == NULL){
        printf("Could not open numbers.txt\n");
        return -1;
    }

    fprintf(fp,"12 7 3 0 28 74 37 299\n");

    fclose(fp);

    fp = fopen("numbers.txt","r");

    if(fp == NULL){
        printf("Could not open numbers.txt\n");
        return -1;
    }

    for(int i = 0; i < ARRAY_SIZE;i++){
    fscanf(fp,"%d ", &evenNums[i]);
    }
```

```c
    for(int i = 0; i < ARRAY_SIZE;i++){
    fscanf(fp,"%d ", &evenNums[i]);
    }

    fclose(fp);
    printf("\n");

    for(int i = 0; i < ARRAY_SIZE; i++){
    printf("%d ",evenNums[i]);

    }
    return 0;
}
```

Output:

```
12 0 28 74
```

main.c	numbers.txt
1	12 7 3 0 28 74 37 299
2	

Question 2

Source Code:

```c
#include <stdio.h>

int RaiseToPower(int baseVal, int exponentVal){
    int resultVal;

    if (exponentVal == 0) {
        resultVal = 1;
    }
    else {
        resultVal = baseVal * RaiseToPower(baseVal, exponentVal-1);
    }

    return resultVal;
}

int main(void) {
    int userBase;
    int userExponent;

    scanf("%d", &userBase);
    scanf("%d", &userExponent);
    printf("%d^%d = %d\n", userBase, userExponent, RaiseToPower(userBase, userExponent));

    return 0;
}
```

Output:

```
12
2
12^2 = 144
```

Question 3

Source Code:

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

int stringLength(char myString[]){


    if(myString[0]=='\0'){

        return 0;

    }


    else
        return 1 + stringLength(myString + 1);


}


int main(int argc, const char * argv[]) {

    char tocalc[50];

    printf("Enter a string: ");

    scanf("%s",tocalc);

    int length= stringLength(tocalc);

    printf("The length of \"%s\" is: %d\n",tocalc,length);



}
```

Output:

```
Enter a string: aryan is a good person
The length of "aryan" is: 5
```