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C Programming Worksheet

Please fill out the following document. Create .ino files in arduino to perform the following tasks. Save and submit both the worksheet and the .ino file.

1. Fill in the blanks of the following code fragment so that the elements of the array are printed in reverse order, starting with the last element.

```
int egArray[10] = { 2, 4, 6, 8, 10, 1, 3, 5, 7, 9 };

for ( int index= 9 ; index>=0; index-- )
{
    Serial.println( egArray[ index ] );
}
```

2. Now create your own array filled with 10 numbers and fill out the for loop so that the variable sum contains the sum of the 10 numbers.

```
int Numbers[10] = {1,1,2,3,5,8,13,21,34,55};

int sum =  0 ;

for (int index = 0; index<10; index++)
{
        sum = Numbers[index]  +  sum;
}
```

3. Translate this for loop to an equivalent while loop. Write your new code in the box to the right.

```
int i;
for ( i = 0; i < 20; i++)
{
        Serial.println(i);
}
```

```
int i=0;
while(i<20){
        Serial.println(i++);
}
```

4. Create a function named ArrayAverage that passes in an array of 10 integers and returns the average of the array (use a double for the result)

```
double ArrayAverage(int[] input){
        int sum=0;
        for(int i=0;i<10;i++){
                sum+=input[i];
        }
        return sum/10.0;
}
```

Turning in the worksheet:
1. Save Worksheet as PDF
2. Save all the questions into different .ino files
3. Zip all of the .ino files into one zip folder
4. Submit the PDF & zip folder onto gradescope