4. The population of a town is 100000. The population has increased steadily at the rate of 10% per year for the last 10 years. Write a program to determine the population at the end of each year in the last decade.

```
#include <stdio.h>
#include <math.h>
int main() {
  double population = 100000;
  double rate = 0.10;    //10% growth rate
  printf("Year \t Population\n");
  printf("-----------------\n");
  for (int year = 1; year <= 10; year++) {
    population = population * (1+rate);
    printf("%d \t %.0f\n", year, population);
    }
  return 0;
}
```

exp3loopspyramid1.c | exp3population.c

exp3population.c > ...

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

int main() {
    // Initial population
    double population = 100000;
    double rate = 0.10; // 10% growth rate

    printf("Year\tPopulation\n");
    printf("---------------------\n");

    for (int year = 1; year <= 10; year++) {
        population = population * (1 + rate);
        printf("%d\t%.0f\n", year, population);
    }

    return 0;
}
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE PORTS

```
c -o exp3population } ; if ($?) { .\exp3population }
Year    Population
--------------------
1       110000
2       121000
3       133100
4       146410
5       161051
6       177156
7       194872
8       214359
9       235795
10      259374
PS C:\Users\abiga\OneDrive\Desktop\Absproj>
```