

Experiment 4: Loops

4.4. 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.

Ans-:

```
#include <stdio.h>

int main() {
    printf("Name - Aryan kamboj\nSAP ID - 590025526\ncourse - BCA\nBatch - 6");
    printf("\n-----\n");

    float population = 100000;

    printf("Population Growth for the Last 10 Years:\n\n");

    for (int year = 1; year <= 10; year++) {
        population = population + (population * 0.10); // increase by 10%
        printf("End of Year %d: Population = %.0f\n", year, population);
    }

    return 0;
}
```

Output :

```
aryankamboj@users-MacBook-Air lab_7 % cd "/Users/aryankamboj/Desktop/c_programming_theory/lab_7/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/aryankamboj/Desktop/c_programming_theory/lab_7/"tempCodeRunnerFile
Name - Aryan kamboj
SAP ID - 590025526
course - BCA
Batch - 6
-----
Population Growth for the Last 10 Years:

End of Year 1: Population = 110000
End of Year 2: Population = 121000
End of Year 3: Population = 133100
End of Year 4: Population = 146410
End of Year 5: Population = 161051
End of Year 6: Population = 177156
End of Year 7: Population = 194872
End of Year 8: Population = 214359
End of Year 9: Population = 235795
End of Year 10: Population = 259374
```