Course Title:	Programming Fundamentals Lab (CL1002)
Assignment Title:	Lab Class Task (Manual 06)
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LAB EXERCISES [6 Marks]

1. Write a C program to solve the money saving problem. You start by saving $1 on the first day and increase your savings by $1 each subsequent day. Your program should calculate how many days it will take for your total savings to reach or exceed $100.

2. Write a C program to determine the depreciation of a car. The car is purchased for $30,000 and depreciates by 10% each year. Your program should find and print the value at the end of each year until the value falls below $15,000. Also, print the number of years it took for the value to drop below $15,000.

3. Write a C program to calculate a jogger's progress. The jogger runs 500 meters on the first day and increases the distance by 5% each subsequent day. Your program should calculate how many days it will take for the jogger to run at least 2 kilometers (2000 meters) in a single day. Print the distance run on the final day.

Question 1

```c
#include<stdio.h>
int main() {
    int day=0;
    int total=0;
    while (total <= 100){
        day++;
        total += day;
    }
    printf("It will take %d days to reach or exceed $100 in savings.\n", day);
    return 0;
}
```

```
C:\Users\usman\OneDrive\Documents\PF LAB\q2\lab 6 q1.exe
It will take 14 days to reach or exceed $100 in savings.

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Process exited after 0.06072 seconds with return value 0
Press any key to continue . . .
```

Question 2

```c
#include<stdio.h>
int main(){
    float value=30000;
    int years=0;
    while (value >=15000){
        years++;
        value=value*0.9;
        printf("value = %.2f years = %d \n", value, years);
    }
    printf("\nIt took %d years for the car value to drop below $15,000.\n", years);
    return 0;
}
```

```
C:\Users\usman\OneDrive\Documents\PF LAB\q2\q2 lab 6.exe
value = 27000.00 years = 1
value = 24300.00 years = 2
value = 21870.00 years = 3
value = 19683.00 years = 4
value = 17714.70 years = 5
value = 15943.23 years = 6
value = 14348.91 years = 7

It took 7 years for the car value to drop below $15,000.

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Process exited after 0.06319 seconds with return value 0
```

Question 3

```c
#include<stdio.h>
int main() {
    int days=1;
    float daily_distance=500;
    while (daily_distance <= 2000){
        days++;
        daily_distance *= 1.05;
    }
    printf("It will take %d days to run at least 2000 meters.\n", days);

    printf("Distance on final day: %.2f meters\n", daily_distance);
    return 0;
}
```