Editorial

The Epidemic

This is a very simple *simulation* problem. The actual growth of the virus cells in the body may not be similar to the problem description. But computer programs are widely used to forecast this growth with real data. There are several age-groups of cells and each day these numbers update according to the given criteria.

You simply need to do this *update* to the variables which stores the count of cells at each age as follows.

```
#include <stdio.h>

using namespace std;
int d; // the number of days
int adultCells,day0Cells,day1Cells,day2Cells,day3Cells,day4Cells,totalCells;// all child cells and grown cells

int main(){

    scanf("%d",&d);

    day0Cells=1; // first day
    for(int i=2;i<=d;i++){ // start updating from day 2--> we don't do update for day1 (see given table)

        adultCells+=day4Cells; // growth of the child cells
        day4Cells= day3Cells;
        day3Cells= day2Cells;
        day2Cells= day1Cells;
        day1Cells= day0Cells;

        day0Cells= adultCells*3; // adult cells reproduce new cells

        totalCells = adultCells+day0Cells+day1Cells+day2Cells+day3Cells+day4Cells;
    }
    printf("%d\n",totalCells); //output the total cells \n is the newline character
}
```