//program to take an input in form of number and display it in words 0 to999999999

#include<stdio.h>

#include<conio.h>

#define SIZE 9

int top = -1;

int stack[SIZE];

int nested\_flag = 1;

void push(int item)

{

if(top==SIZE-1)

{

printf(" Number too big.Stack overflow.");

printf("Press any key to exit::::::");

getch();

}

else

stack[++top] = item;

}

void print(int num)

{

switch(num)

{

case 0:

printf("zero");

break;

case 1:

printf("One ");

break;

case 2:

printf("Two ");

break;

case 3:

printf("Three ");

break;

case 4:

printf("Four ");

break;

case 5:

printf("Five ");

break;

case 6:

printf("Six ");

break;

case 7:

printf("Seven ");

break;

case 8:

printf("Eight ");

break;

case 9: printf("Nine ");

break;

}

}

void print\_pair(int num)

{

switch(num)

{

case 1:

switch(stack[top])

{

case 1:

printf("Eleven ");

break;

case 2:

printf("Twelve ");

break;

case 3:

printf("Thirteen ");

break;

case 4:

printf("Fourteen ");

break;

case 5:

printf("Fifteen ");

break;

case 6:

printf("Sixteen ");

break;

case 7:

printf("Seventeen ");

break;

case 8:

printf("Eighteen ");

break;

case 9: printf("Nineteen ");

break;

case 0:

printf("Ten ");

nested\_flag = 0;

}

break;

case 2:

printf("Twenty ");

break;

case 3:

printf("Thirty ");

break;

case 4:

printf("Forty ");

break;

case 5:

printf("Fifty ");

break;

case 6:

printf("Sixty ");

break;

case 7:

printf("Seventy ");

break;

case 8:

printf("Eighty ");

break;

case 9: printf("Ninety ");

break;

}

}

void translate(int length)

{

if(length==9)

{

print\_pair(stack[top--]);

if(stack[top+1]!=1 && nested\_flag)

print(stack[top--]);

else

top--;

printf("Crores ");

}

if(length>=7)

{

if(length==8)

{

print(stack[top--]);

printf("Crores ");

}

print\_pair(stack[top--]);

if(stack[top+1]!=1 && nested\_flag)

print(stack[top--]);

else

top--;

if(stack[6]!=0||stack[5]!=0)

printf("Lakhs ");

if(nested\_flag==0)

nested\_flag = 1;

}

if(length>=5)

{

if(length==6)

{

print(stack[top--]);

printf("Lakhs ");

}

print\_pair(stack[top--]);

if(stack[top+1]!=1 && nested\_flag)

print(stack[top--]);

else

top--;

if(stack[4]!=0||stack[3]!=0)

printf("Thousand ");

if(nested\_flag==0)

nested\_flag = 1;

}

if(length>=3)

{

if(length==4)

{

print(stack[top--]);

printf("Thousand ");

}

print(stack[top--]);

if(stack[2]!=0)

printf("Hundered ");

if(stack[1]==0&&stack[0]!=0)

{

printf("AND ");

print(stack[0]);

}

else if(stack[1]!=0)

{

printf("AND ");

print\_pair(stack[top--]);

if(stack[top+1]!=1 && nested\_flag)

print(stack[top--]);

}

}

if(length==2)

{

print\_pair(stack[top--]);

if(stack[top+1]!=1 && nested\_flag)

print(stack[top--]);

if(nested\_flag==0)

nested\_flag = 1;

}

if(length==1)

print(stack[top--]);

}

void main()

{

long number;

printf("\nEnter the number to be translated: ");

scanf("%ld",&number);

while(number>0)

{

push(number%10);

number = number/10;

}

translate(top+1);

getch();

}