**25.Happy Number**

**PROGRAM:**  
#include <iostream>

using namespace std;

int numSquareSum(int n)

{

int squareSum = 0;

while (n) {

squareSum += (n % 10) \* (n % 10);

n /= 10;

}

return squareSum;

}

bool isHappynumber(int n)

{

int slow, fast;

slow = fast = n;

do {

slow = numSquareSum(slow);

fast = numSquareSum(numSquareSum(fast));

} while (slow != fast);

return (slow == 1);

}

int main()

{

int n = 13;

if (isHappynumber(n))

cout << n << " is a Happy number\n";

else

c

out << n << " is not a Happy number\n";

}

**OUTPUT:**  
