**Week 1**

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**Question: Quadratic Probing**

**Code:-**

#include<stdio.h>

#include<math.h>

#define SIZE 10

int hash[10];

void insert\_with\_quadratic\_probing(int);

int hashing\_fun(int);

int main(){

int item;

for(int i=0; i<10;i++){

printf("Enter the number to be inserted\n");

scanf("%d", &item);

insert\_with\_quadratic\_probing(item);

printf("\n");

for(int j = 0;j<10; j++){

printf("%d ", hash[j]);

}

}

return 0;

}

void insert\_with\_quadratic\_probing(int item){

int key = hashing\_fun(item);

int index;

for(int i =0; i<10; i++){

index = (key+i\*i)%SIZE;

if(hash[index] == 0 ){

hash[index] = item;

printf("Inserted %d at index %d\n", item, index);

break;

}

}

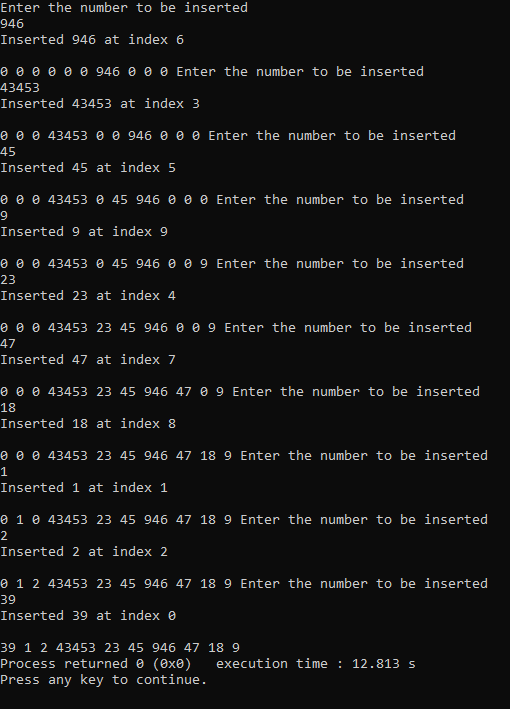
}

int hashing\_fun(int x){

return x%SIZE;

}

**Output:-**

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