LAB 10:

HASHING USING LINEAR PROBING:

#include <stdio.h>

#include <stdlib.h>

#include <stdbool.h>

#include <string.h>

#define size 10

int table[size];

void push(int data);

int pop(int data);

void search(int data);

void display();

int main(){

for(int i = 0; i < size; i++) table[i] = -1;

int choice;

printf("1. Insert\n2. Delete \n3. Display\n4. Exit\nChoice: ");

scanf("%d", &choice);

int a;

while(choice != 4){

switch(choice){

case 1:

printf("Enter integer to be pushed: ");

scanf("%d", &a);

push(a);

break;

case 2:

printf("Enter integer to be popped: ");

scanf("%d", &a);

int res = pop(a);

if (res == 0) printf("Integer popped\n");

else printf("Integer not found\n");

break;

case 3:

display();

break;

default:

printf("Idk");

break;

}

printf("Enter choice: ");

scanf("%d", &choice);

}

}

void push(int data){

int hash = data%size;

while (table[hash] != -1 && hash <= (hash+size-1)) hash = (hash+1)%size;

if (table[hash] == -1) table[hash] = data;

else printf("Table is full");

}

int pop(int data){

int hash = data%size;

for(int i = 0; (table[hash] != data) || (i < size); i++, hash = (hash+1)%size);

if (table[hash] == data) {

table[hash] = -1; return 0;

}

return -1;

}

void display(){

printf("Table: ");

for(int i = 0; i < size; i++)

printf("%d ", table[i]);

printf("\n");

}

