"C PROGRAM TO REVERSE A STRING USING STACK"

#include <stdio.h>

#include <string.h>

#include <stdlib.h>

#include <limits.h>

struct Stack

{

int top;

unsigned capacity;

char\* array;

};

struct Stack\* createStack(unsigned capacity)

{

struct Stack\* stack = (struct Stack\*) malloc(sizeof(struct Stack));

stack->capacity = capacity;

stack->top = -1;

stack->array = (char\*) malloc(stack->capacity \* sizeof(char));

return stack;

}

int isFull(struct Stack\* stack)

{ return stack->top == stack->capacity - 1; }

int isEmpty(struct Stack\* stack)

{ return stack->top == -1; }

void push(struct Stack\* stack, char item)

{

if (isFull(stack))

return;

stack->array[++stack->top] = item;

}

char pop(struct Stack\* stack)

{

if (isEmpty(stack))

return INT\_MIN;

return stack->array[stack->top--];

}

void reverse(char str[])

{

int n = strlen(str);

struct Stack\* stack = createStack(n);

int i;

for (i = 0; i < n; i++)

push(stack, str[i]);

for (i = 0; i < n; i++)

str[i] = pop(stack);

}

int main()

{

char str[] = "GeeksQuiz";

reverse(str);

printf("Reversed string is %s", str);

return 0;

}