

25/9/20 Lab1-Stack

#include <stdio.h>

#define size 3

int top = -1;

void push(int [], int);

int pop(int []);

void display(int []);

int main()

{

int stack[size], choice, element;

~~char ch;~~

do {

printf("Enter your choice: \n");

~~scanf~~ printf("1. Push \n");

printf("2. Pop \n");

printf("3. Display \n");

printf("4. Exit \n");

scanf("%d", &choice);

switch(choice)

{

case 1: printf("Enter the element to be pushed: \n");

scanf("%d", &element);

push(stack, element);

break;

case 2: element = pop(stack);

if (element == -1)

printf("Stack Underflow");

else

(1)

```
printf ("Popped element is %d \n", element);
break;
```

```
case 3: display (stack);
break;
```

```
case 4: printf ("Exit");
break;
```

```
default: printf ("Invalid choice");
}
```

```
} while (choice != 4);
return 0;
```

```
}
```

```
void push (int stack[], int item)
{
    if (top == size - 1)
```

```
    {
        printf ("Stack Overflow");
    }
```

```
else {
```

```
    top ++;
```

```
    stack[top] = item;
}
```

```
}
```

```
int pop (int stack[])
```

```
{
    int popitem;
```

```
    if (top == -1)
```

```
        return -1;
```

```
    else {
```

```
        popitem = stack[top];
```

```
        top --;
```

```
        return (popitem);
```

②

```
}  
}  
  
void display (int stack[])  
{
```

```
    int i;
```

```
    printf ("The stack element : \n");
```

```
    for (i = top; i >= 0; i--)
```

```
    {  
        printf ("%d ", stack[i]);
```

```
    }
```