```c
#include <stdio.h>

#include <stdlib.h>

#define MAX_SIZE 10

int stack1[MAX_SIZE];

int stack2[MAX_SIZE];

int top1 = -1;

int top2 = -1;

void push(int x) {

if (top1 == MAX_SIZE - 1) {

printf("Queue is full. Cannot push.\n");

return;

}

stack1[++top1] = x;

printf("Pushed: %d\n", x);

}

int pop() {

if (top1 == -1 && top2 == -1) {

printf("Queue is empty. Cannot pop.\n");

return -1;

}

if (top2 == -1) {

while (top1 != -1) {

stack2[++top2] = stack1[top1--];

}

}

int popped = stack2[top2--];

printf("Popped: %d\n", popped);

return popped;

}

int peek() {

if (top1 == -1 && top2 == -1) {
```

```c
printf("Queue is empty. Cannot peek.\n");

return -1;

}

if (top2 == -1) {

while (top1 != -1) {

stack2[++top2] = stack1[top1--];

}

}

int front = stack2[top2];

printf("Peek: %d\n", front);

return front;

}

int empty() {

return (top1 == -1 && top2 == -1);

}

int main() {

// Test the queue operations

push(1);

push(2);

push(3);

peek();

pop();

peek();

push(4);

push(5);

while (!empty()) {

pop();

}

pop();

return 0;

}
```

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(globals)

TDM-GCC 4.9.2 64-bit Profiling

Project   Classes

C:\Users\mnith\OneDrive\Documents\program 21.exe

```
Pushed: 1
Pushed: 2
Pushed: 3
Peek: 1
Popped: 1
Peek: 2
Pushed: 4
Pushed: 5
Popped: 2
Popped: 3
Popped: 4
Popped: 5
Queue is empty. Cannot pop.

--------------------------------
Process exited after 0.5631 seconds with return value 0
Press any key to continue . . .
```

Compiler   Resources   Compile Log   Debug   Find Results   Close

Abort Compilation

☐ Shorten compiler paths

```
Compilation results...
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- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\mnith\OneDrive\Documents\program 21.exe
- Output Size: 153.720703125 KiB
- Compilation Time: 0.80s
```

Line: 62   Col: 2   Sel: 0   Lines: 62   Length: 1049   Insert   Done parsing in 0.063 seconds