

1- Write a *Linked Stack* class that includes *push*, *pop*, *peek*, *size*, *isEmpty* methods.

Write a **main program** that takes an expression as string from the user and then checks the parenthesis of the expression by using Linked Stack.

Assume that the expression only includes round brackets “(“ and “)”.

Example:

Input string: "(x*(y+z))+2"

Output: true

Input string: "(x+y)*z) ("

Output: false

2- Write a *Linked Queue* class that includes *enqueue*, *dequeue*, *size*, *peek*, *isEmpty* methods.

Write a **main program** that inserts *n* numbers into a Linked Queue and then finds the median element of the queue.

Example 1:

```
LinkedList LQ = new LinkedList();
```

```
LQ.Add(10);
```

```
LQ.Add(20);
```

```
LQ.Add(30);
```

```
LQ.Add(40);
```

```
LQ.Add(50);
```

```
LQ.Add(60);
```

```
LQ.Add(70);
```

```
LQ.Median();
```

Output: 40

Example 2:

```
LinkedList LQ = new LinkedList();
```

```
LQ.Add(10);
```

```
LQ.Add(20);
```

```
LQ.Add(30);
```

```
LQ.Add(40);
```

```
LQ.Add(50);
```

```
LQ.Add(60);
```

```
LQ.Median();
```

Output: 35