

پگاه گورکانی

ساختمان داده

تمرین ششم

سکشن دوشنبه

دکتر اسکندری

```
class Expression:
```

```
def __init__(self):
```

```
self.expressions = []
```

```
def insert(self, exp):
```

```
self.expressions.append(exp)
```

```
def delete(self, index):
```

```
if index >= 0 and index < len(self.expressions):
```

```
self.expressions.pop(index)
```

```
else:
```

```
print("Index out of range.")
```

```
def print(self):
```

```
for i in range(len(self.expressions)):
```

```
print(f"{i}: {self.expressions[i]}")
```

```
def add(self, index1, index2):
```

```
if index1 >= 0 and index1 < len(self.expressions) and index2 >= 0 and index2 < len(self.expressions):
```

```
result = self.expressions[index1] + self.expressions[index2]
```

```
self.expressions.append(result)
```

```
else:
```

```
print("Index out of range.")
```

```
def mul(self, index1, index2):
```

```
if index1 >= 0 and index1 < len(self.expressions) and index2 >= 0 and index2 < len(self.expressions):
```

```
result = self.expressions[index1] * self.expressions[index2]
```

```
self.expressio
```

```
def main():

    expression = Expression()

    while True:

        print("\n1. insert")

        print("2. Delete")

        print("3. Print")

        print("4. Add")

        print("5. Mul")

        print("6. Exit")

        choice = input("Enter your choice: ")

        if choice == '1':

            exp = input("Enter expression: ")

            expression.insert(exp)

        elif choice == '2':

            index = int(input("Enter index to delete: "))

            expression.delete(index)

        elif choice == '3':

            expression.print()

        elif choice == '4':

            index1 = int(input("Enter first index: "))

            index2 = int(input("Enter second index: "))

            expression.add(index1, index2)

        elif choice == '5':

            index1 = int(input("Enter first index: "))

            index2 = int(input("Enter second index: "))

            expression.mul(index1, index2)

        elif choice == '6':

            break

        else:

            print("Invalid choice")
```