Slip 22: HTML Program - PHP Menu-driven Queue Operations

```
<html>
<body>
  <form action="slip22.php" method="POST">
    <input type="radio" name="op" value="insert"> Insert Element<br>
    <input type="radio" name="op" value="delete"> Delete Element<br>
    <input type="radio" name="op" value="display"> Display Queue<br>
    <input type="submit" value="Perform Operation">
  </form>
</body>
</html>
```

PHP File (slip22.php)

```
<?php
session_start();
if (!isset($_SESSION['queue'])) {
    $_SESSION['queue'] = [];
}

$op = $_POST['op'];

switch ($op) {
  case 'insert':
    array_push($_SESSION['queue'], rand(1, 100));
    echo "Element inserted.";
    break;
  case 'delete':
    if (!empty($_SESSION['queue'])) {
      array_shift($_SESSION['queue']);
      echo "Element deleted.";
    } else {
      echo "Queue is empty.";
    }
    break;
  case 'display':
    if (!empty($_SESSION['queue'])) {
      echo "Queue: " . implode(", ", $_SESSION['queue']);
    } else {
      echo "Queue is empty.";
    }
    break;
}
?>
```

Slip 22: Python Program - Data Rescaling Using MinMaxScaler

```
import pandas as pd
from sklearn.preprocessing import MinMaxScaler

df = pd.read_csv('winequality-red.csv')
scaler = MinMaxScaler()
scaled_data = scaler.fit_transform(df)
```

```
print(pd.DataFrame(scaled_data, columns=df.columns))
```

Slip 22: Python Program - Data Standardization and Normalization

```
import pandas as pd
from sklearn.preprocessing import StandardScaler, Normalizer

df = pd.read_csv('winequality-red.csv')

scaler = StandardScaler()
standardized_data = scaler.fit_transform(df)
print("Standardized Data:")
print(pd.DataFrame(standardized_data, columns=df.columns))

normalizer = Normalizer()
normalized_data = normalizer.fit_transform(df)
print("Normalized Data:")
print(pd.DataFrame(normalized_data, columns=df.columns))
```