In [ ]:
```
import numpy as np
dtypes = [('emp_id', int), ('last_name', 'U20'), ('first_name', 'U20'), ('gender

employee_table = np.array([], dtype=dtypes)
emp1 = (1000, "Trbati", "Yolanda", "F", "Programmer")
emp2 = (1001, "Kleinn", "Joel", "M", "Programmer")
emp3 = (1002, "Ginsburg", "Laura", "F", "President")
emp4 = (1003, "Cox", "Jennifer", "F", "Programmer")
emp5 = (1005, "Ziada", "Mauri", "M", "Product Designer")
emp6 = (1006, "Keyser", "Cara", "F", "Account Executive")
emp7 = (1010, "Smith", "Roxie", "M", "Programmer")
emp8 = (1011, "Nelson", "Robert", "M", "Programmer")
emp9 = (1012, "Sachsen", "Lars", "M", "Support Technician")
emp10 = (1013, "Shannon", "Don", "M", "Product Designer")

employee_table = np.append(employee_table, np.array([emp1, emp2, emp3,emp4,emp5,
print(employee_table)
```

```
[(1000, 'Trbati', 'Yolanda', 'F', 'Programmer')
 (1001, 'Kleinn', 'Joel', 'M', 'Programmer')
 (1002, 'Ginsburg', 'Laura', 'F', 'President')
 (1003, 'Cox', 'Jennifer', 'F', 'Programmer')
 (1005, 'Ziada', 'Mauri', 'M', 'Product Designer')
 (1006, 'Keyser', 'Cara', 'F', 'Account Executive')
 (1010, 'Smith', 'Roxie', 'M', 'Programmer')
 (1011, 'Nelson', 'Robert', 'M', 'Programmer')
 (1012, 'Sachsen', 'Lars', 'M', 'Support Technician')
 (1013, 'Shannon', 'Don', 'M', 'Product Designer')]
```

In [ ]:
```
#1
number_of_male_employees = len(employee_table[employee_table['gender'] == 'M'])
print(number_of_male_employees)
```

```
6
```

In [ ]:
```
#2
employees_with_last_name_starting_with_s = employee_table[np.char.startswith(emp
print(employees_with_last_name_starting_with_s)
```

```
[(1010, 'Smith', 'Roxie', 'M', 'Programmer')
 (1012, 'Sachsen', 'Lars', 'M', 'Support Technician')
 (1013, 'Shannon', 'Don', 'M', 'Product Designer')]
```

In [ ]:
```
female_employees = employee_table[employee_table['gender'] == 'F']
sorted_female_employees = female_employees[np.argsort(female_employees['first_na
print(sorted_female_employees)
```

```
[(1000, 'Trbati', 'Yolanda', 'F', 'Programmer')
 (1002, 'Ginsburg', 'Laura', 'F', 'President')
 (1003, 'Cox', 'Jennifer', 'F', 'Programmer')
 (1006, 'Keyser', 'Cara', 'F', 'Account Executive')]
```

In [ ]:
```
emp_id = employee_table['emp_id'].reshape(2, 5)
print(emp_id)
```

```
[[1000 1001 1002 1003 1005]
 [1006 1010 1011 1012 1013]]
```

In [ ]:
```
start_emp_id = 1002
end_emp_id = 1012
```

```
mask = (employee_table['emp_id'] >= start_emp_id) & (employee_table['emp_id']<=
columns_to_extract = ['emp_id', 'last_name', 'Title']
filtered_data = employee_table[mask][columns_to_extract]
print(filtered_data)
```

```
[(1002, 'Ginsburg', 'President') (1003, 'Cox', 'Programmer')
 (1005, 'Ziada', 'Product Designer') (1006, 'Keyser', 'Account Executive')
 (1010, 'Smith', 'Programmer') (1011, 'Nelson', 'Programmer')
 (1012, 'Sachsen', 'Support Technician')]
```