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Course Code:	DJ19CEL602
Experiment No.:	02

AIM: Hiring Problem

CODE:

Ascending:

```
import random
candidate = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
interview = []
hire = []

for i in range(0, 10):
  x = random.choice(candidate)
  candidate.remove(x)
  interview.append(x)

print(interview)
for i, num in enumerate(interview, 1):
  largest_num = max(interview[:i])
  print(f"Hired: {largest_num}, till {i} interviews")
  hire.append(largest_num)

print(hire)
print("The number of candidates hired is:", len(set(hire)))
cost = len(set(hire)) - 1
print("Thus firing cost will be:", cost)
```

OUTPUT:

```
[5, 8, 4, 0, 7, 9, 2, 3, 1, 6]
Hired: 5, till 1 interviews
Hired: 8, till 2 interviews
Hired: 8, till 3 interviews
Hired: 8, till 4 interviews
Hired: 8, till 5 interviews
Hired: 9, till 6 interviews
Hired: 9, till 7 interviews
Hired: 9, till 8 interviews
Hired: 9, till 9 interviews
Hired: 9, till 10 interviews
[5, 8, 8, 8, 8, 9, 9, 9, 9, 9]
The number of candidates hired is: 3
Thus firing cost will be: 2
```

Randomized:

```
import random

candidates = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
interviewed_candidates = []
hired_candidates = []

# Randomly select and interview candidates
for i in range(len(candidates)):
    selected_candidate = random.choice(candidates)
    interviewed_candidates.append(selected_candidate)
    candidates.remove(selected_candidate)

# Hire the best candidate so far
max=-1
for i in range(len(interviewed_candidates)):
    if interviewed_candidates[i] > max:
        max=interviewed_candidates[i]
        hired_candidates.append(interviewed_candidates[i])

# Calculate firing cost
firing_cost = len(hired_candidates) - 1

print("Interviewed candidates:", interviewed_candidates)
print("Hired candidates:", hired_candidates)
print("Number of candidates hired:", len(hired_candidates))
print("Firing cost:", firing_cost)
```

OUTPUT:

```
Interviewed candidates: [6, 8, 1, 2, 4, 5, 9, 7, 0, 3]
Hired candidates: [6, 8, 9]
Number of candidates hired: 3
Firing cost: 2
```

CONCLUSION: Hence we implemented the Hiring Problem.