

Problem 2: We are given two arrays that represent the arrival and departure times of trains that stop at the platform. We need to find the minimum number of platforms needed at the railway station so that no train has to wait.

```
def minimum_platforms(arr, dep):  
    arr.sort()  
    dep.sort()  
  
    platforms = 1  
    max_platforms = 1  
    arr_idx, dep_idx = 1, 0  
    n = len(arr)  
  
    while arr_idx < n and dep_idx < n:  
        if arr[arr_idx] <= dep[dep_idx]:  
            platforms += 1  
            arr_idx += 1  
        else:  
            platforms -= 1  
            dep_idx += 1  
  
    max_platforms = max(max_platforms, platforms)  
  
    return max_platforms
```

```
arrival_times = ["9:00", "9:45", "9:55", "11:00", "15:00", "18:00"]  
departure_times = ["9:20", "12:00", "11:30", "11:50", "19:00", "20:00"]
```

```
arrival_minutes = [int(time.split(':')[0]) * 60 + int(time.split(':')[1]) for time in arrival_times]  
departure_minutes = [int(time.split(':')[0]) * 60 + int(time.split(':')[1]) for time in departure_times]
```

```
result = minimum_platforms(arrival_minutes, departure_minutes)
```

```
print(result)
```

