Assignment #2

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"Q No 1"

1- Define Class :

```
┌─ class ──────────┐
│ Students : S      │
├──────────────────┤
│ # Students ≤ 40   │
└──────────────────┘
```

2- Add a Student :

```
┌─ add Student ──────────────┐
│ Δ Class                     │
│                             │
│ name? : S                   │
├─────────────────────────────┤
│ # Student ≤ 40 ∧            │
│ [name?] ∉ Student           │
│ Student' = Student ∪ [name?] │
└─────────────────────────────┘
```

3- Display Student:

```
┌─ Display student ─────────┐
│  ≡ Class                  │
│  Disp ! : S               │
├───────────────────────────┤
│  # Student ≤ 40           │
│  Disp ! = student         │
└───────────────────────────┘
```

4- Drop Student:

```
┌─── Drop Student ──────────┐
│  Δ Class                  │
│                           │
│  name ? : S               │
├───────────────────────────┤
│  # student ≤ 40           │
│  [name ?] ∉ Student       │
│  student' = Student/[name ?] │
└───────────────────────────┘
```

5- Display Size:

```
┌─── Display size ──────────┐
│  ≡ Class                  │
│                           │
│  size ! : N               │
├───────────────────────────┤
│  # Student ≤ 40           │
│  size ! = # student       │
└───────────────────────────┘
```