Object State Management

user\_name\_table

hashed\_password\_table

username\_table

first\_name\_table

email\_address\_table

user\_type\_table

category\_table

item\_table

**Database**

**Business Logic**

**User Screen**

new\_user\_name

new\_first\_name

new\_last\_name

new\_email\_address

new\_user\_type

new\_password

user\_name

password

a = user\_name

b = H(password)

a = new\_user\_name

b = new\_first\_name

c = new\_email\_address

d = new\_user\_type

e = new\_password

username\_table.name = a

first\_name. first\_name\_table = b

email\_address. email\_address\_table = c

user\_type. user\_type\_table = d

category\_chosen

item\_chosen

category. category\_table = a

item\_chosen. item\_table = b

Object Diagram

Instance 2

Instance 1

Smart City User

User = 2

Smart City User

User = 1

Instance 2

Instance 1

Smart City User

User Type = Tourist

Smart City User

User Type = Student

Instance 1

Category

Category Type = Libraries

Instance 1

Item

Item Type = State Library of Queensland

Category

Category Type = Museums

Item

Item Type = Queensland Gallery of Modern Art

Instance 2

Instance 2