Chris

- fred : Fred
- name : String

+ placeOrder(order: String): void
+ getName(): String

Fred

- name : String
- store : RonbbinsFlorist

+ forwardTo(order String): void
+ getName(): String

WholeSaler

- name : String
- grower : Grower

+ forwardToGrower(order : String, store : RobbinsFlorist): FlowerBouquet
+ getName() : String

orders from

1...*

links orders

1...*

commit orders

1...*

commit orders

1...*

Robbin's Florist

- wholesaler : Wholesaler
- arranger : FlowerAranger
- delivery : DeliveryPerson
- name : String

+ recieveOrder(order : String): void
+ getName() : String

Grower

- gardener : Gardener
- name : String

+ forwardToGardener(order :String, wholesaler : WholeSaler): FlowerBouquet
++ getName() : String

Delivery Person

- robin: Robin
- name : String

+ forwardToDeliver(bouquet : FlowerBouquet): void
+ getName() : String

uses delivery service

1...*

uses bouquet arrange service

1...*

delivers bouquets

1...*

commit orders

1...*

Gardener

-name String

+ recieveOrderAndPrepare(order :String, grower : Grower): FlowerBouquet
+ getName() : String

Robin

- name : String

+ takeTheDelivery(bouquet : FlowerBouquet): void
+ getName() : String

Flower Arranger

- name : String

+ recieveFlowerAndReturnArranged(bouquet : FlowerBouquet, store : RobbinsFlorist): FlowerBouquet
+ getName() : String

create

1...*

FlowersBouquet

- namesOfFlowers: String
- arranged: boolean

+ arrange(FlowerBouquet): void
+ getNamesOfFlowers() : String
+ getOrder () : Order

Principles of Object-Oriented Programing

Exercise 1

1. Responsibilities of each agent:

<u>Chris</u>- **Requesting/Ordering** a flowers order.
<u>Fred</u>- **Links** between a costumer to Robbin's Florist (forwarding order details).
<u>Robbin's Florist</u>- **Receiving** orders from Fred and then **orders** the specific flowers from the wholesaler. After **receiving** the flowers, **send** them for arrangement to the Flower Arranger, and then **send** to the addressee through the Delivery Person.
<u>Wholesaler</u>- **Receiving** an order and **forwarding** it to the Grower. After the order is complete, the wholesaler **receives** the flowers and **forwards** them to Robbin's Florist.
<u>Grower</u>- **Receiving** the flowers order and **making the order** from the Gardener. After **receiving** from the Gardener, **forwards** them to the wholesaler.
<u>Gardener</u>- **Receiving** the flowers order from the Grower, **picking the specified flowers** and **forwards** them to the Grower.
<u>Flower Arranger</u>- **Receiving** the flowers from Robbin's Florist, **arranging** them for delivery and **forwarding** them to Robbin's Florist.
<u>Delivery Person</u>- **Receives** the flowers from Robbin's Florist and **bringing them** to the addressee (Robin).
<u>Robin</u>- **Receiving** the flowers.

2.

Pair	Client	Server
Chris & Fred	Chris	Fred
Fred & Robbin's Florist	Fred	Robbin's Florist
Robbin's Florist & Wholesaler	Robbin's Florist	Wholesaler
Wholesaler & Grower	Wholesaler	Grower
Grower & Gardener	Grower	Gardener
Robbin's Florist & Flower Arranger	Robbin's Florist	Flower Arranger
Robbin's Florist & Delivery Person	Robbin's Florist	Delivery Person
Delivery Person & Robin	Delivery Person	Robin