CRC CARDS
CLASS-RESPONSIBILITY-COLLABORATION

CRC Cards

- Used to document the
  - Responsibilities
  - Collaborations
  of a class

Responsibilities and Collaborations

- Responsibilities of a class fall into two categories:

  - **Knowing Responsibilities**

  - **Doing Responsibilities**

Responsibilities and Collaborations

- **Knowing Responsibilities**
  - Things an instance must know
  - Normally it knows values of its **attributes** and its relationships
- **Doing Responsibilities**
  - Things an instance must be able to do
  - Execute its **operations,** call other operations

Responsibilities and Collaborations

- **Collaboration**
  - Use cases involve a more than one class
- These classes form a collaboration
- Objects working together to service a request
- Allows you to focus on **Clients, Servers,** and **Contracts**

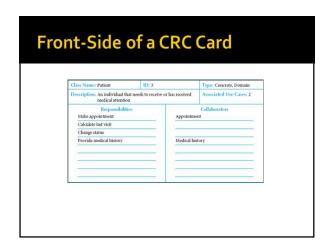## Clients, Servers, Contracts

- **Client**
  - Instance of a class
  - Sends a request to instance another class
- **Server**
  - Instance of a class the receives the request
- **Contract**
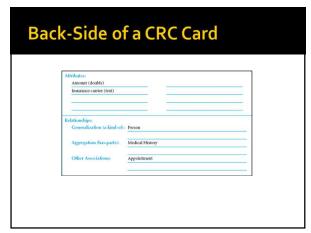 - Formalizes the interaction between the client and server
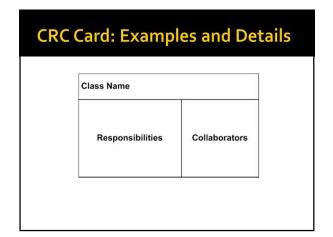
Clients, Servers, Contracts

- **Example**
  - Patient makes appointment with Doctor
  - **Client:** Patient object
  - **Server:** Doctor object
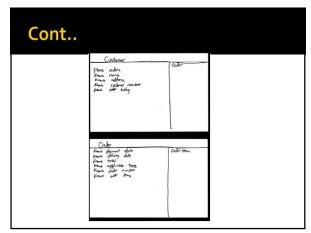 - **Contract:** Both agree to be at a specific place at a specific time

Elements of a CRC Card

- Class Name – Noun (not proper)
- ID – To track design to requirements
- Description – Brief text definition
- Responsibilities – Doing responsibilities (Operations)
- Attributes – Knowing responsibilities
- Relationships
  - Generalization
  - Aggregation
  - Other Associations
- Collaborators

Front-Side of a CRC Card

Class Name: Patient	ID: 3	Type: Concrete, Domain
Description: An individual that needs to receive or has received medical attention		Associated Use Cases: 2

Responsibilities	Collaborators
Make appointment	Appointment
Calculate last visit	
Change status	
Provide medical history	Medical history

Back-Side of a CRC Card

Attributes:
Amount (double)
Insurance carrier (text)

Relationships:
Generalization (a-kind-of): Person

Aggregation (has-parts): Medical History

Other Associations: Appointment

CRC Card: Examples and Details

Class Name	
Responsibilities	**Collaborators**

Cont..

Cont..

Student	
Student number Name Address Phone number Enroll in a seminar Drop a seminar Request transcripts	Seminar