Responsibilities

- Two kinds of responsibilities
 - knowledge maintained by object attributes.

Assigning east a Property behaviour Experition Help

- Define services provided by the class to system.
- Two rough ideas/for types of classes:

 The Stip of Colors of Col
 - Action objects can perform operations for client code.
- Aveletic swiften current at powcoder
 private knowledge may need to be implemented by a class,
- private knowledge may need to be implemented by a class, but definition delayed.
- Concentrate on what the class does not how it's done.
- I.e., How it interacts with other classes.

Identifying Classes and Responsibilities

- Examine nouns in requirements specification:
 - May become a class.

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- Information words can imply "how much, how many, how big",
- . https://powcoder.com
 - Active voice verb may indicate a responsibility.
 - Turn passive voice sentences into active voice and examine.

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- Perform a system walk-through (Use Case Diagrams in UML terms):
 - Make sure that all system responsibilities identified.

Assign Responsibilities

• Identified responsibilities must be assigned to classes.

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• Some assignments will be obvious, others will require some

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- State responsibilities as generally as possible.
- Keep behaviour (actions) with related information.

Addrewie what is poweder

- Responsibilities can be shared among related objects.
- Each class should have one main purpose, one idea, one main responsibility.

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- What the system knows information it stores.
- htte 2 sto ot 2 OstWsCOGET.COM
- Class intelligence:
 - What does the class know information it stores.
 - And ser We out hat (spowcoder
 - What services does it use (client view).

Assignment Project Exam Help State responsibilities as generally as possible.

- - Instead of stating that a LineElement knows how to draw a line and Rectangle Element, knows how to draw a rectangle.
 - May lead to more general classes (i.e., superclasses)
- If An object may tain particular information, it should be responsible for operations on that lata and vice versa.

Responsibility Guidelines (2)

Keep information about one thing in one place.

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- If more than one object must know the information
 - As ign the information to one object/class if there is one that has few other responsibilities.
 - 2. If classes requiring the information have few responsibilities, Adlesed We engle hat powcoder
 - 3. Create a new class to take the responsibility of managing the information. Other classes can collaborate with this new class to access the information.

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- Some responsibilities need to be shared among several classes.
- They are compound responsibilities.

 Split in Side of Specific Components to distribute intelligence.
- Indicative of relationships between the classes.



Assignment Project Exam Help • Difficulties in assigning responsibilities can occur:

- - 1. A class is missing:

- 2. Responsibility could be assigned to more than one class:
- Sometimes the assignment is not obvious. Make a tentative rbitty vacament by a wan through See of Michael.

 Try an alternative. See how that works.

Specifying Responsibilities: CRC Cards

 Class Responsibility Cards (CRC) help with the design of classes and their collaborations.

Assignment Project Exam Help

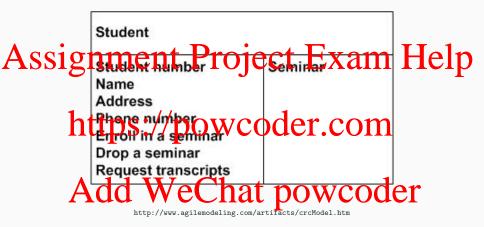
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http://www.agilemodeling.com/artifacts/crcModel.htm

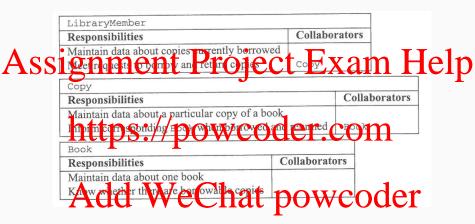
- Responsibilities attributes and behaviours/operations for this class.
- Collaborations other classes that it needs to work with.

CRC Cards Example



(Maybe you decide Address should be its own class and then Student would also collaborate with the Address class.)

CRC Example 2



Using UML, P. Stevens and R. Pooley

Note: Do not based your A1 design off this. The spec for A1 might be very different to the spec of the library here.

Assignment de projectes Elegant Help These are your candidate classes.

- 2. Draw up CRC cards for your preliminary class design.
- 3. https://pewcoder.com
 - If a class has too many responsibilities, divide it up.
 - If it has too few responsibilities, may be it should be merged

Add We Chat powcoder When settled, begin a UML design to precisely specify

4. When settled, begin a UML design to precisely specify responsibilities and collaborations.

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Designing an object/oriented system for the game of Connect 4. **DOWCOGET.COM**

- Write CRC cards specifying the classes in the system.
- Choose one of your classes and draw it in UML.
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Assignment betrojecter Examurhelp

• Customers can come in and place an order of items.

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- Customers have personal information: name, address etc.
- There is also facilities to check the inventory of items.
- · Add chiplatepowcoder
- Choose one of your classes and draw it in UML.