Exercise 3

1) Class diagram : Websitemonitor
   • Store content in website class

2) GRASP

Finding the Responsible Class for a Method

• Information Expert Principle (ab Folie 24)
• suggests assigning responsibility to the class that has the information needed to fulfill the responsibility

Steps to Find the Responsible Class for a Method:

1. **Identify the Method Responsibility**: Clearly state what the method should do

2. **Determine the Required Information**: Identify the information required to accomplish this responsibility

3. **Locate the Class with the Information**: Find the class that has or has access to this information

4. **Assign the Method**: Assign the method to this class

• **Example** from the PDF:

   If the method is getTotal() for a sale, the class Sale is the responsible class because it knows about its SalesLineItems and can ask them for subtotals.

Finding the Responsible Class for Object Creation

• Creator Principle (ab Folie 33)

• suggests that a class should be responsible for creating an object if one or more of the following conditions apply:

1. **Aggregates the Objects**: Contains or manages instances of the object

2. **Contains the Objects**: Logically contains instances of the object

3. **Records Instances**: Keeps track of instances of the object

4. **Closely Uses the Objects**: Uses instances of the object frequently

5. **Has the Initializing Data**: Has the information required to initialize the object

Steps to Find the Responsible Class for Object Creation:

1. **Identify the Object to be Created**: Clearly define the object that needs to be created.

2. **Analyze the Relationships**: Determine which class aggregates, contains, records, uses, or has the initializing data for the object.

3. **Assign the Creation Responsibility**: Assign the responsibility to the appropriate class.

3) (SWED3 - Folie 36)
   • CRC cards: Class-Responsibility-Collaboration Cards

- a brainstorming and design tool used in object-oriented software development
- Define classes, their responsabilities and their interactions
- Identify potential design flaws and get a clear understanding of the system's structure and behaviour