# Report Final Assignment

Student information

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Approach

<*Geef aan hoe jullie de opdracht hebben aangepakt en wie wat heeft gedaan, maximaal 1 A-4. Geef expliciet aandacht aan de volgorde van activiteiten*>

***Scenario 3, Interactive Navigation***

## Assignment 1: Problem analysis

|  |  |
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|  | Jabberpoint is a simple slide show application that can read a slide show from a source allows the user to navigate through the slides and can save the state of the running slide show to the source again.  This problem analysis is split into two parts: The first part focuses on the identification of the concepts, the entities. The latter part will elaborate on the behavior of those concepts and the relationships between them. |

### Concepts

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| --- | --- |
| *slide show*  *head, title, theme*  *slide*  *thread*  *slide item*  *text item*  *level*  *bitmap item*  *action item*  *displayable item*  *style of a displayable item* | The main concept is the **slide show**. A slide show is a presentation of a series of slides (still images) on the screen, in a *prearranged sequence*. A slide show consists of the following parts:   * A **head**, which consists of a **title** and a **possible theme** (ask for clarification) * A list of **slides**. There must be *at least one slide* present (ask for clarification) in the slide show. Slides in a slide show have a prearranged order (first slide will have sequence no. 1 and the last slide sequence no. n) * A list of **threads** (ask for clarification).   A slide contains a number of **slide items**, which are items that are displayed on the slide. Slide items are displayed one after the other in a predefined order. The user will not have control over when or how the slide items are displayed.  A slide item can have three forms:   * A **text item**. An item that consists of a simple text (string) and has a certain **level** * A **bitmap item**. An item that represents an image. Also a bitmap item has a certain level * An **action item**. An action item cannot be displayed, but contains another slide item, which can be a text, bitmap or action item. The “leaf” item of an action item is a non-action item, i.e. a text item or a bitmap item. Looking at it in a different way: A text item or a bitmap item can have (optionally) 1 or more actions attached to it. It must be noted that an action can only have one child action. An action item doesn’t have a level, as it is not associated with the displaying of an item on the screen   From the above, it can be deduced, that text and bitmap items are **displayable items**, and that action items are not directly displayed on the screen, but contain a displayable item at the leaf-level.  A displayable item has a level and an action item does not have a level. A level is associated with a certain **style**. So displayable items have associated styles. An action item is not associated with a style directly.  A text item is styled in a different way than a bitmap item. A style for a text item can for example have a certain color, while a color for a bitmap style is not appropriate, as the coloring aspect of a bitmap is inherently determined by the bitmap itself. The following table shows the characteristics of both type of styles: |

|  |  |
| --- | --- |
| **Type of style** | **Characteristics** |
| Common style | * The common style characteristics are shared by both text styles and bitmap styles * X-padding (“indent”). Padding on the x-axis, amount of space that is taken into account from the beginning of the containing frame * Y-padding (“leading”) . Padding on the y-axis, amount of space that is taken into account from the y-value + height of the previous item |
| Text style | * Common style characteristics * Font size * Font color |
| Bitmap style | * Common style characteristics |

*Table 1: Styles types*

The following constrains and additional functionalities are valid:

* X- and y-values are deduced, based on the containing frame, the level associated with the style, and the sequence no. of the item
* When drawing items, the scale of the screen is also taken into account.
* Styles will be hard-coded in the application

The next figure can be used to put these characteristics in perspective.

Text item

Bitmap item

leading

indent

scale

font color

font size

*Figure 1: How styles affect slide items*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *action*  *navigation action*  *current slide*  *absolute, relative navigation action*  *presentation-level action*  *auxiliary action* | An important aspect of this assignment is the concept of “action”. The first type of **action** is the **navigation** action. This result of this action is a change of the **current** slide. The current slide in a presentation is the slide that is being displayed at a certain moment in time. The current slide is a feature that should be maintained throughout different presentation sessions and as such, should be saved upon user request. When the application starts, the current slide is determined from the source where the presentation is stored.  The following navigation actions should be supported by the application:   * Go to next slide * Go to previous slide * Go to first slide * Go to last slide * Go to slide i   Navigation actions can either be **absolute** or **relative**. A relative navigation action takes the current slide into account. An absolute navigation action does not take the current slide into account, but indicates directly the slide that should be navigated to.  A second type of action is an action that operates on the level of presentations. A presentation can be opened or saved  Finally, the last type of action is an auxiliary action. An auxiliary action for example is a beep sound, or a graphical effect. Behavior  |  |  |  | | --- | --- | --- | | **Type** | **Initiator** |  | | Navigation | User, by   * clicking on slide item * using menu items * using keyboard |  | |  |  |  | |  |  |  | |

## Assignment 2: Design

## Assignment 3: Design decisions

## Assignment 4: Source code