LiT – Graph Model

Storyline entities

Note: If the player is on an **end of story** page, the following page will be the route map view. After having visited this page the story can not be edited anymore, it is **finished**

Note: As soon as the player visits a page with a Storyline entity assigned, the player is locked into that Storyline (entry point page)

Note: Predefined set of style rules(CSS). At Storyline level, the editor can select from a set of predefined themes

Note: When the timer ends, the editing components will be blocked and a message Time expired is shown. The user then needs to manually choose a transition in order to continue

Entities and relations

Module
- title
- icon
- isActive

Storyline
- title
- icon
- virtualTimeLimit
- isActive

VisualTheme

- Storyline **ENTRY_POINT_FOR** 0:1 → Page
- Storyline 0:n **uses** 1 VisualTheme
- Module **STARTS_AT** 0:n → Page

Chapter
- title
- icon

- Page 0:1 **BELONGS_TO** 1 → Chapter
- Page **SETS_TIME** 0:1 → VirtualTime
- Page **SETS_MONEY** 0:1 → Money
- Page **CREATES 0:n** -createAt[enter, exit] → Notebook entry
- Page **HOSTS** 0:n → Component

VirtualTime

Money

Notebook entry

Page
- title
- isActive
- continueRandomly
- timeLimit
- isTimerVisible
- isEndOfStory
- notebookVisibility
- autoTransitionOnTimerExpiration

Component
- x
- y
- width
- height

Note: Exercise inputs are always saved into notebook

PageTransition
- **buttonText** (empty if DialogResponse choice)

- PageTransition **FROM** 1 → Page
- PageTransition **TO** 1 → Page
- PageTransition **DEPENDS_ON 0:n** -criteria [visited, notVisited, timeExpiration] → Page
- PageTransition **CHARGES** 0:1 → Money
- PageTransition **CHARGES** 0:1 → VirtualTime
- Exercise **DEPENDS_ON 0:n** -criteria [correct_input, incorrect_input, no_input] → PageTransition

Note: If multiple transitions are available the editor needs to set the priority/order of the transitions. Used to provide auto transition functionality for timer expiration

Note: Page Transition buttons will automatically be rendered at the end of the page, depending on availability

Money
- time
- absolute/relative

VirtualTime
- time
- absolute/relative

Exercise

TextExercise
- minLength
- maxLength
- placeholderText
- defaultText
- rowHeight

- TextExercise **SOLVED_IF** 0:n → TextSolution

TextSolution
- textToCompare
- textSolutionMode [containts, fullMatch, fuzzyComparison]

CheckboxExercise
- minSelection
- maxSelection

- CheckboxExercise **HAS_OPTION** 1:n → Option

RadioButtonExercise
- RadioButtonExercise **HAS_OPTION** 1:n → Option

DateExercise
- isMandatory
- placeholderText

- DateExercise **EXPECTS 0:n** → DateSolution

UploadExercise
- isMandatory
- fileTypes
- isDelivery

Image

- Character **PORTRAYED_BY** 1 → Image

Character
- salutation
- firstName
- lastName
- mailAddress

Note: If no button text is defined the dialog is shown immediately on page visit

DialogExercise
- buttonText

- DialogExercise **SAYS** 1:n → DialogSpeech
- DialogSpeech **SPEAKER** 0:n 1 → Character
- DialogSpeech 0:1 **CONTINUES_WITH** 0:n → DialogResponse
- DialogSpeech **PROVIDES** → DialogNotebookEntry
- DialogResponse **CREATES 0:1** → DialogNotebookEntry
- DialogResponse **USE_TRANSITION 0:1** → PageTransition

DialogResponse
- createsNotebookEntry

DialogNotebookEntry

- Character **REPLY_TO_ADDRESS** → MailExercise

Note: Considered solved on reply Mail is sent by the system on page visit in the background

MailExercise
- subject
- body
- createNotebookEntries

Note: Attachments of response mail should also be saved into notebook (filtered by filetype)

Note: RIch Text:
- Inline images, Links, Formatiing
- Placeholders: (FirstName, LastName, Salutation)

- MailExercise **CREATES 0:1** → MailNotebookEntry
- InfoMail **CREATES 0:1** → MailNotebookEntry

InfoMail
- subject
- body
- createNotebookEntries

MailNotebookEntry

Note: RIch Text:
- Font family, font size, text color, background color, bold, italic, underline, alignment
- Placeholders: FirstName, LastName, Mail, Virtual Story Time, Left, PageTimeLimit, MoneyBalance.
- Links, Tooltips

TextComponent
- TextComponent **HOSTS 0:n** → TextTooltip

TextTooltip

LinkComponent
- forceDownload

- LinkComponent **LINK_TO 0:1** → URL
- LinkComponent **REQUIRES 0:1** → UniversityAccess
- LinkComponent **LINK_TO 0:1** → Resource

URL

UniversityAccess

Resource

Note: Resource elements are managed sparely and can be (re-)used globally by different components

PdfComponent
- PdfComponent **HOSTS** → PDF

PDF

DOCX

ImageComponent
- viewRectange
- zoomable

- ImageComponent **HOSTS** → Image

Image

Description of Types of Relations

- Nested Entity: ◆ **HOSTS** 0:n →
- Reference: 0:1 ——— 0:n →
- Extend: **BELONGS_TO** ⇠ - - -