SCORM

SCORM Compliant Authoring Tool

Developed at An-Najah University

By :

Sameer Allan Alawneh

Haytham Fahed Sawalhi

Supervisors :

Dr. Raed Alqadi

Dr. Luai Malhis

What is the Authoring tool

- It is a program used to generate a SCORM packages , it will facilitate creating courses based on SCORM standard.

- i.e. It will generate all needed files and code.

- The author does not need to deal with small details of the standard .

Learning Activity

A learning activity is defined as a meaningful unit of instruction.

A learning activity can be a module, lesson, etc.

Learning activities can also consist of sub-activities such as a pre-test or post-test.

Take Lesson

Take a Pre-Test

Experience Content

Take a Final Test

Activity Tree

Its a tree of the activities (lesson slides quiz's exams etc.) these activities are arranged in hierarchal manner like tree Therefore it is called the activity tree .
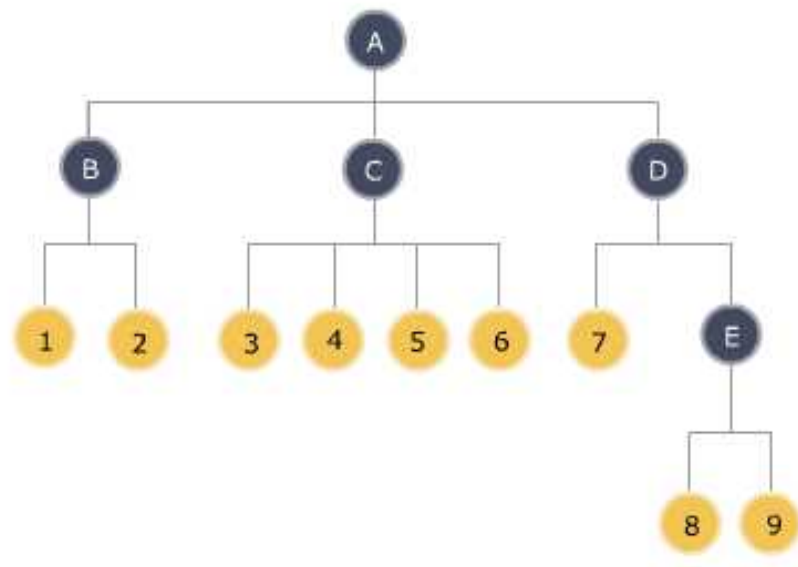
Examples of Authoring Tools

- eXeLearing Authoring Tool

- Reload Editor

eXeLearning   - Advantages

It is a free and user friendly xHTML
e-learning editor

The main advantage of this tool is the ease
of use and great support of webpage
editing (the main part of any e-learning
activity).

Also support simple SCORM compliant
quiz's .

eXeLearning - Disadvantages

Supports SCORM 1.2 standard , and does not support SCORM 2005 3rd edition .

Does not support sequencing , it only supports simple sequencing provided by arranging the activities in the activity tree .

Reload Editor – Advantages

It fully Supports SCROM 2004 3rd edition

Also supports editing of SCROM packages previously generated by other authoring tools.

Reload Editor – Disadvantages

Does not Support HTML Editing and Exam editing that provided by eXe .

Difficult to use and requires a professional person to deal with. This software is more of a SCORM Editor than an Authoring Tool .

Making   a Course 1

Instructional Designer gathers content

Making a Course 2

Instructional Designer organizes the content

Making   a Course 3

Instructional Designer and Developer communicate how the content will flow

Making   a Course 4

Developer creates an Activity Tree
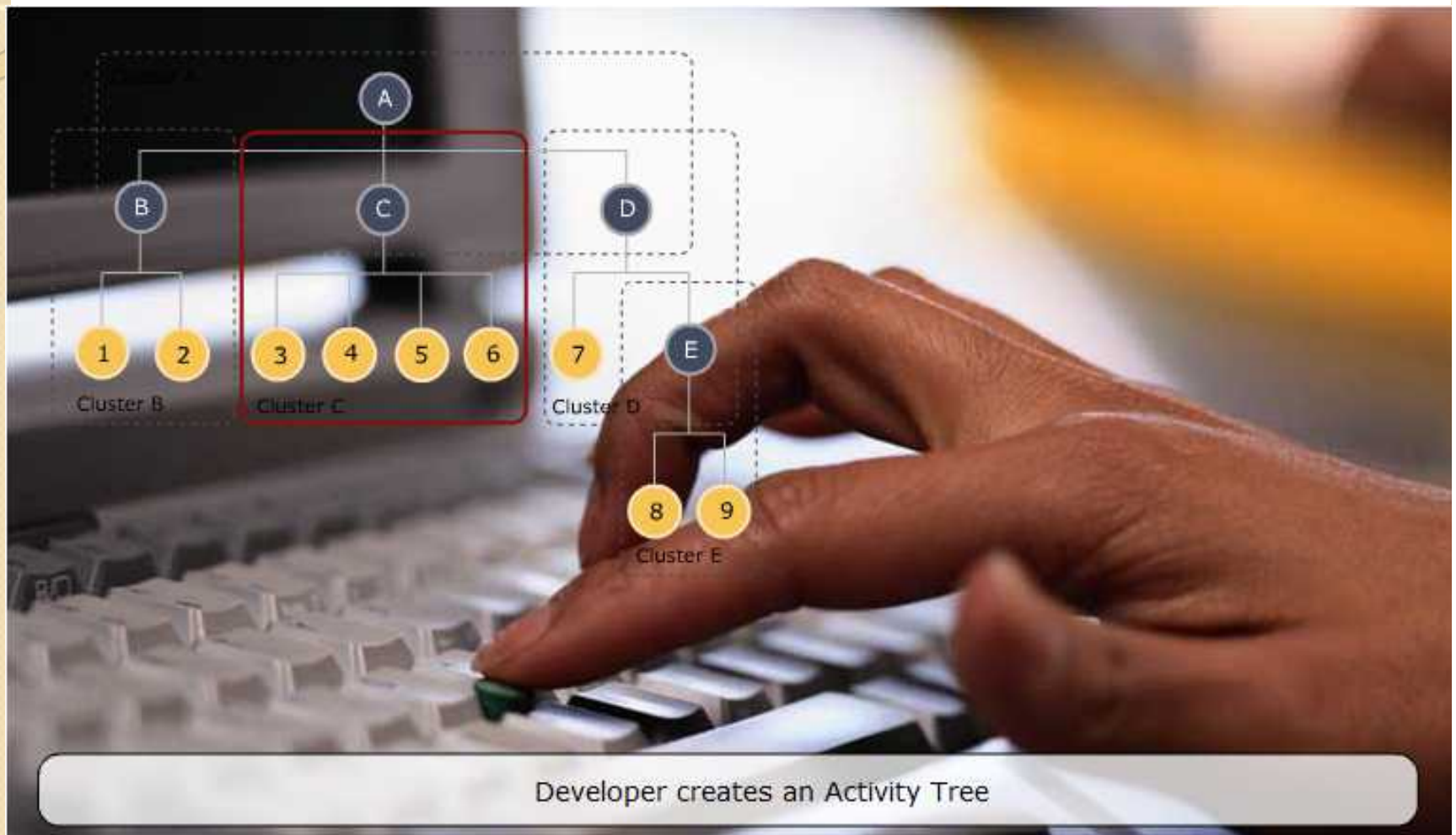
Making   a Course 5
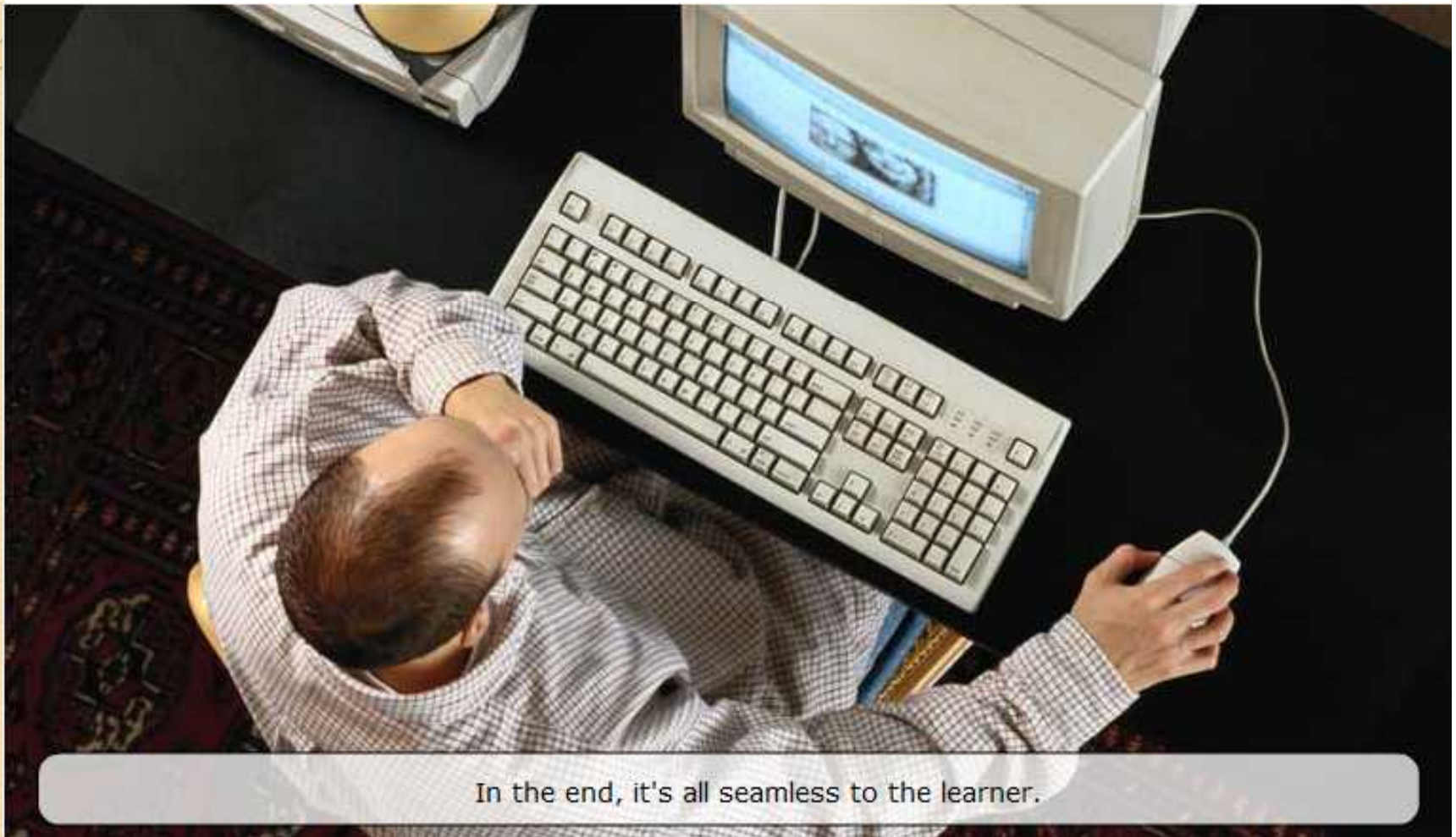
In the end, it's all seamless to the learner.

Our Authoring Tool

We try to combine the advantages of eXeLearning authoring tool and Reload Editor .

We can edit HTML pages easily with a user-friendly Editor and edit the complex sequencing and Rule based Sequencing using a rich embedded SCROM Editor .

What can you do in our authoring tool

Create a SCORM 2004 compliant course and save it as project file , also you can export the final package

Import packages generated from other authoring tools like eXe and modify these packages

Additional feature

Adding PowerPoint file to item

Adding word file to item

Adding quizzes [exams]

Optional objective to each item

Logging file , for future analysis and fault detecting

Error Reporting , assist the developer to improve the software .

File   Insert   Edit   Help

Insert: PPT Exam Doc

Base
  animals
    Introduction
    Som
    Simple
    imple
    Quick Qu
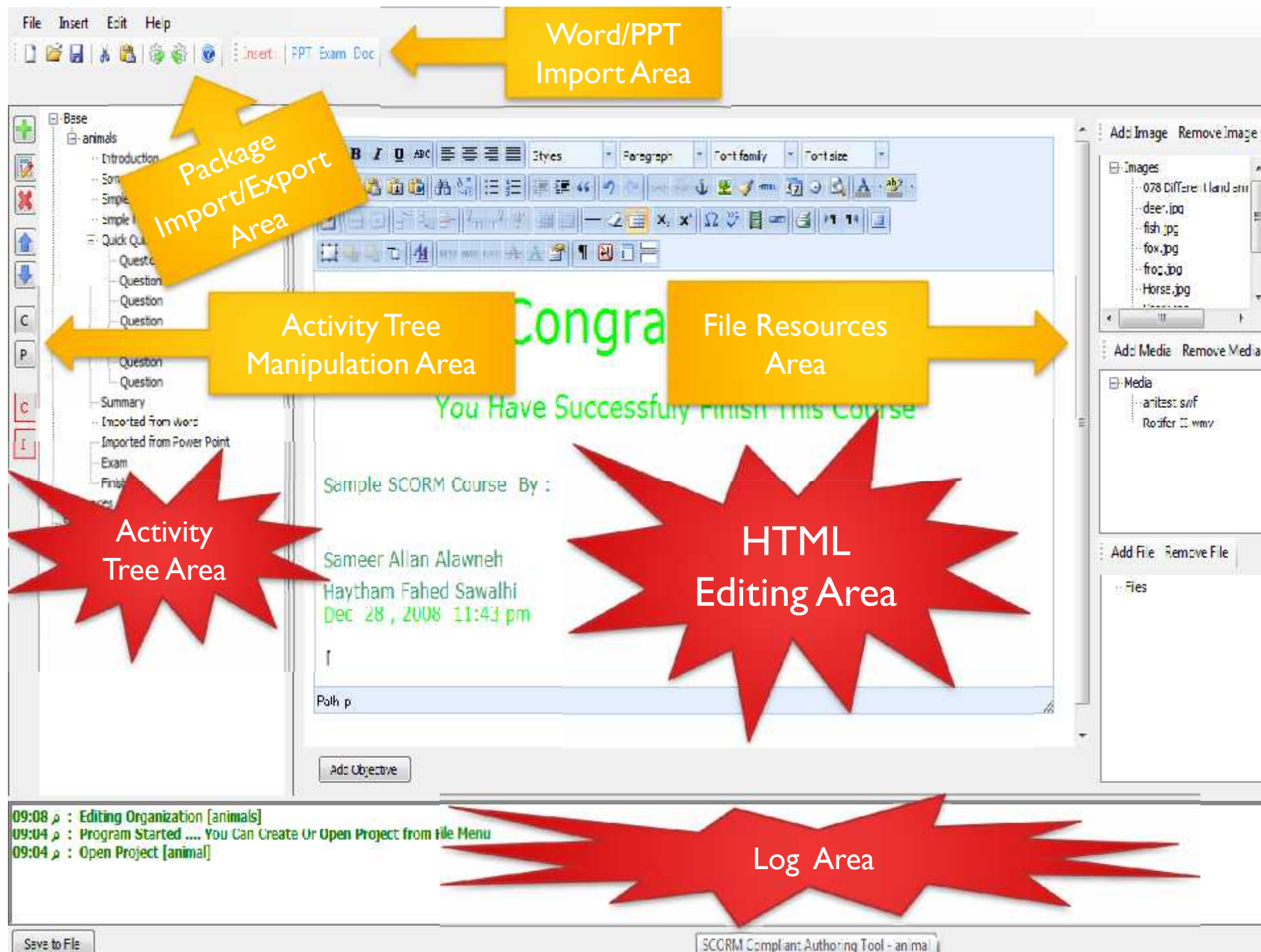   Questo
      Question
      Question
      Question
      Question
      Question
    Summary
    Imported from Word
    Imported from Power Point
    Exam
    Finis

B *I* **U** ABC Styles Paragraph Font family Font size

Package
Import/Export
Area

Activity Tree
Manipulation Area

File Resources
Area

Add Image   Remove Image

Images
  078 Different Hand ani
  deer.jpg
  fish.jpg
  fox.jpg
  frog.jpg
  Horse.jpg

Add Media   Remove Media

Media
  anitest.swf
  Rotifer II.wmv

Congra

You Have Successfuly Finish This Course

Sample SCORM Course By :

Sameer Allan Alawneh
Haytham Fahed Sawalhi
Dec 28 , 2008 11:43 pm

Path p

Activity
Tree Area

HTML
Editing Area

Add File   Remove File

Files

Add Objective

09:08 م : **Editing Organization [animals]**
09:04 م : **Program Started .... You Can Create Or Open Project from File Menu**
09:04 م : **Open Project [animal]**

Log Area

Save to File

SCORM Compliant Authoring Tool - animal

Item Form - Map Info

Quick Quiz
  Sequencing
    Control Mode
    Objectives
      Primary Objective
        Map Info
      Objective
        Map Info
    Randomization Controls
    Rollup Rules
      Rollup Rule
        Rollup Conditions
          Rollup Condition
        Rollup Action
    Sequencing Rules
      Pre Condition Rule
        Rule Conditions
          Rule Condition
        Rule Action

Exist Global Objectives :

Target Objective ID :   pass_quiz_1

Read Satisfied Status :   True

Read Normalized Measure :   True

Write Satisfied Status :   False

Write Normalized Measure :   False

Apply   reload

Sequencing Tree Area

Editing Panel

Sample Course – Animals

We will show how to create a course by using an example .

- First step is to collect info and determine the organization of the activity tree .

We have 9 activities and a quiz and exam .

 1 – Introduction , general Information

 2 – Some animals , pictures of some animals

 3 – Simple animal Flash , to show how to embed a Flash in the learning activity .

 4 – Simple animal Video , to show how to embed a Video in the learning activity .

Sample Course – Animals Cont …

5 – Quick Quiz , Random question from 8 questions ,
   to evaluate the learner progress and don't allow
   it to continue until pass the quiz .

6 – Summary , a message telling the learner whether
   pass or fail the quiz .

7 – Imported from Word , learning materials imported
   from a word file .

8 – Imported from Power Point , learning materials
   imported from power point file .

9 – Exam , 5 question to evaluate the learner
   knowledge .

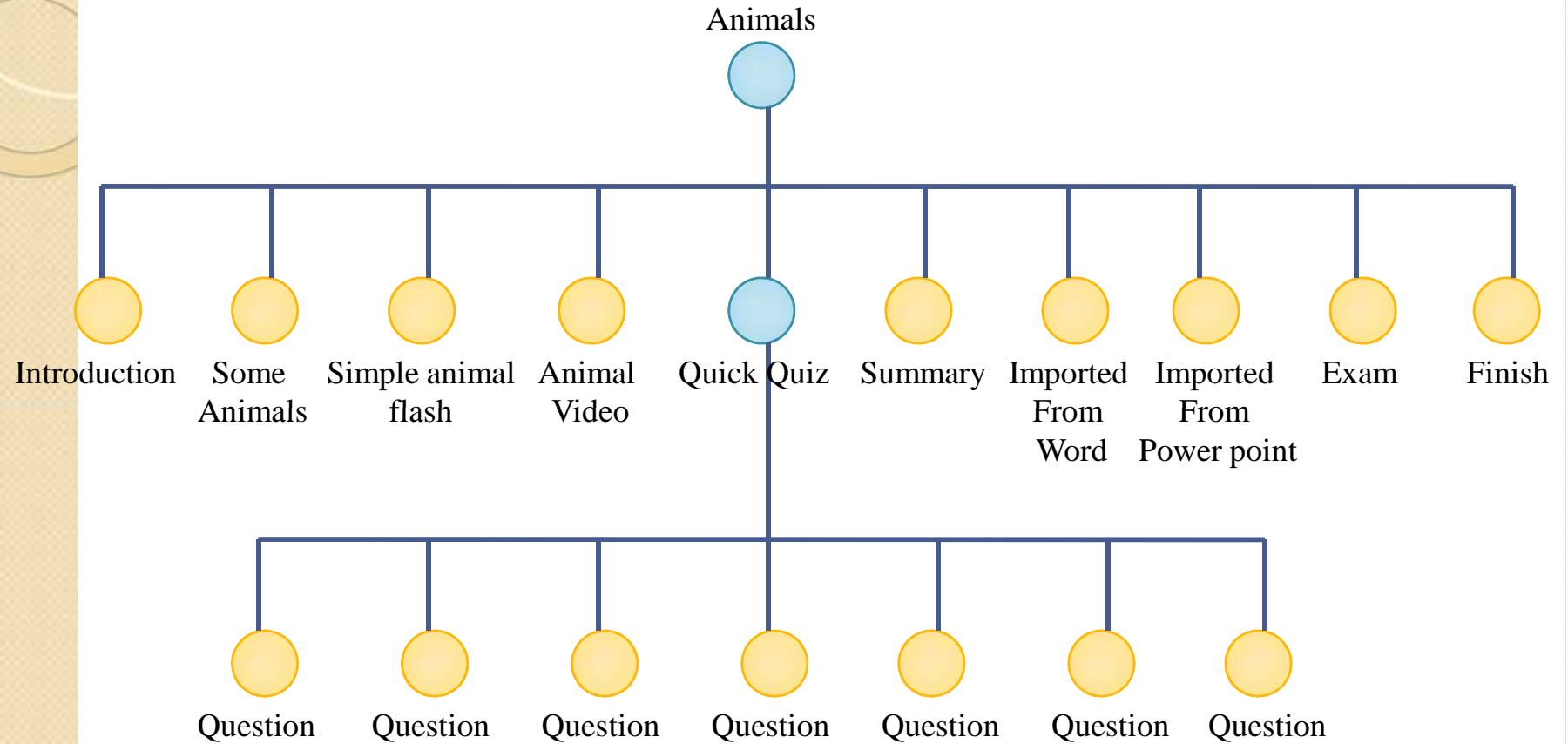10 – Finish , Congratulation message .

Animals – Activity Tree

Now we will build the activity tree for the course , the Quick Quiz will be implemented as a sub tree and use sequencing and randomization primitives to select one of them to be displayed in the course .

We build the activity tree in the following slide .

Animals - Activity Tree

Animals

Introduction   Some Animals   Simple animal flash   Animal Video   Quick Quiz   Summary   Imported From Word   Imported From Power point   Exam   Finish

Question   Question   Question   Question   Question   Question   Question

Animals – Activity Tree

Add Activity	➕
Edit Activity	📝
Delete Activity	❌
Move Up	⬆
Move Down	⬇
Cut Activity	C
Past Activity	P
	O
	I

- Base
  - animals
    - Introduction
    - Some Animals
    - Simple Animal Flash
    - Simple Nano Animal Video
    - Quick Quiz
      - Question
      - Question
      - Question
      - Question
      - Question
      - Question
      - Question
    - Summary
    - Imported from Word
    - Imported from Power Point
    - Exam
    - Finish
  - Resources
  - Sequencing Collection

Sequencing Requirements

Note : building the tree above will provide simple sequencing without rule based primitives , to implement complex sequencing you must have good knowledge of SCORM sequencing primitives as we will notice in the following slides .

Sequencing Requirements

1 – all activities after (Quick Quiz) should not be displayed until pass it .

2 – (Finish) activity should not be displayed until pass the (Exam) activity .

3 – (Quick Quiz) should choose random activity from its children to display at each attempt

4 – maximum number of attempts of (Quick Quiz) should be at most 5

5 – maximum number of attempts of (Exam) should be at most 3

6 – if the (Quiz) or (Exam) passed or maximum number of attempts exceeded , it should be disabled .