**Session Quiz**

1. **Regarding Reactive Web Apps in Outsystems, which of the following options is false?**
   1. A Reactive Web app is a cross-device app.
   2. Data requests are executed synchronously.
   3. The code generated by Outsystems results in a single-page application.
   4. A developer builds the Reactive Web App in Service Studio.
2. **What happens when a developer publishes a module?**
   1. The Outsystems platform compiles it and generates the HTML, CSS, and JavaScript.
   2. The browser opens.
   3. Nothing.
   4. The code is uploaded but only compiled when a user accesses the application.
3. **Which of the following options is false regarding Modules and Applications?**
   1. An application is composed of a set of modules.
   2. Modules can be of different types such as Reactive Web App, Blank or Extension.
   3. Elements can be exposed and reused, but only within the same application.
   4. A module that reuses an element from another module is called a Consumer.
4. **Which of the following options is correct?**
   1. Screen Actions can call other Screen Actions from a different screen.
   2. Client Actions can call Screen Actions.
   3. Server Actions can call Client Actions.
   4. Client Actions can call Server Actions.
5. **Client Actions and Server Actions can have the following variables:**
   1. Input and Output Parameters, but no Local variables.
   2. Input Parameters and Local Variables, but no Output Parameters.
   3. Input and Output Parameters, as well as Local Variables.
   4. Output Parameters and Local Variables, but no Input Parameters.
6. **The flow of an action can have...**
   1. … multiple Start and End nodes.
   2. … one or more Start nodes but only one End node.
   3. … only one Start node but multiple End nodes.
   4. … only one Start node and one End node.
7. **Business concepts that need to be stored and accessed in our applications should be modelled as...**
   1. Entities.
   2. Entity diagrams.
   3. Entity relationships.
   4. Database tables.
8. **Which of the following mappings between Outsystems and the Database is NOT correct?**
   1. Entities - Tables.
   2. Attributes - Column.
   3. Reference attribute - Primary Key.
   4. Index - Index.
9. **Which of the following statements about Entities is false?** 
   1. Entities have attributes.
   2. Entities do not require an identifier.
   3. Entities are only stored in memory.
   4. Entities can be created, updated, and deleted
10. **If an Entity Attribute named HouseNumber is created, what needs to happen to its Data Type?**
    1. It should be set to Integer.
    2. It should be set to Decimal.
    3. Nothing, it will automatically be set to Identifier.
    4. Nothing, it will automatically be set to Integer.
11. **Which of the following is not an Entity Action of the Customer Entity?**
    1. CreateCustomer.
    2. RetrieveCustomer.
    3. UpdateCustomer.
    4. DeleteCustomer.
12. **Which of the following is a characteristic of a Static Entity?**
    1. It can’t be changed after the first publish.
    2. It contains a set of Records.
    3. It has two Entity Actions.
    4. It can’t be extended with any new attributes.
13. **Regarding the Records of a Static Entity, which of the following options is false?**
    1. The values for all 4 default attributes must be defined.
    2. Records can only be added and removed during development.
    3. The record identifier is the identifier of Static Entity.
    4. The Identifier attribute is required for all Static Entities.
14. **Static Entities are most similar to which other programming concept?**
    1. Linked lists.
    2. Enumeration.
    3. Hash Maps.
    4. Static variables.
15. **Screens can be composed of a combination of several elements called Widgets.** 
    1. True
    2. False
16. **What type of variables can be created inside a Screen?** 
    1. Local Variables only.
    2. Input Parameters only.
    3. Input Parameters and Local Variables.
    4. Input Parameters, Output Parameters, and Local Variables.
17. **Which of the following options is false?** 
    1. Input Parameters allow passing data between Screens when navigating between them.
    2. Local Variables from a Screen may be directly accessed from another Screen.
    3. Local Variables allow temporarily storing relevant information inside a Screen.
    4. When the value of a Local Variable changes the user interface reacts immediately.
18. **In an Aggregate, the Sources section is used for...**
    1. Defining values for testing the Aggregate’s output records.
    2. Defining the Entities, we want to retrieve records from.
    3. Defining conditions to get specific subsets of records.
    4. Defining the order of the Aggregate’s output records.
19. **Considering that we can add several filters to an Aggregate, which of the following options is false?**
    1. A record is included in the output if it matches at least one of the filters.
    2. Filters are concatenated with the AND operator.
    3. All filters are translated to SQL and included in the WHERE clause.
    4. Logical operators and some built-in functions can be used inside filters.
20. **Regarding Sorting in Aggregates, which of the following options is correct?**
    1. Aggregates only support one sorting criterion.
    2. If more than one sorting criterion is defined, all of them must have the same direction (ascending or descending).
    3. It is mandatory to set the direction for all sorting criteria (ascending or descending).
    4. It is only possible to set multiple sorting criteria if duplicate records exist in the entity
21. **In an Aggregate, the purpose of the Test Values section is…**
    1. To define values for testing the preview of the Aggregate’s output.
    2. To set the conditions to get specific records, not all the records.
    3. To define the order of its output records.
    4. To define the entities we want to get records from.
22. **Consider an Aggregate with a "With or Without" join between two entities. What is the expected output of the Aggregate?** 
    1. All records from both Entities (FULL OUTER JOIN).
    2. Only records where there is a match between the two Entities (INNER JOIN).
    3. All records from the left entity even if there is no match in the right entity (LEFT JOIN).
    4. All records from the right entity even if there is no match in the left entity (RIGHT JOIN).
23. **Considering that Aggregates can have hidden columns, which of the following options is correct?**
    1. Hiding columns in the Aggregate only affects the preview of the output.
    2. Columns that are empty in the database are automatically hidden.
    3. The hidden columns help optimizing the Aggregate.
    4. The hidden columns are not part of the output.
24. **Which of the following elements can’t be used to create calculated attributes in an Aggregate?**
    1. Value of the attributes of the Source Entities.
    2. Built-in Functions that can be translated to SQL (e.g. Length(), Power()).
    3. Variables.
    4. Server Actions using Entity Attributes.
25. Consider that we want to apply aggregation functions in an Aggregate. Which of the following options is false?
    1. We can apply multiple aggregation functions inside an Aggregate.
    2. The output of the Aggregate will contain all attributes from the Source Entities plus the aggregation columns.
    3. We can apply the following functions on attributes of integer data type: sum, max, min, count and average.
26. Regarding data relationships, which of the following options is correct?
    1. An Entity must have an identifier to allow relationships.
    2. A reference attribute needs to be mandatory.
    3. An Entity can only have one reference attribute.
    4. The Entity identifier must be an integer.
27. **Which of the following steps is necessary to create a 1-to-1 relationship between Entity A and Entity B?**
    1. Set the data type of the identifier attribute of Entity B to Entity A Identifier.
    2. Add a new Entity C, with two reference attributes of type Entity A Identifier and Entity B Identifier.
    3. Add a new reference attribute of type Entity B Identifier to Entity A.
    4. Add a new Entity C, with the identifier attribute being a composition of types Entity A Identifier and Entity B Identifier.
28. **Which of the following steps is necessary to create a 1-to-many relationship between a Master Entity A and a Detail Entity B?** 
    1. Set the data type of the identifier attribute of Entity B to Entity A Identifier.
    2. Add a new Entity C, with two reference attributes of type Entity A Identifier and Entity B Identifier.
    3. Entity A must have a reference attribute of type Entity B Identifier.
    4. Entity B must have a reference attribute of type Entity A Identifier.
29. **Which of the following steps is necessary to create a many-to-many relationship between Entity A and Entity B?** 
    1. Set the data type of the identifier attribute of Entity B to Entity A Identifier.
    2. Add a new reference attribute of type Entity B Identifier to Entity A.
    3. Add a new Entity C, with two reference attributes of type Entity A Identifier and Entity B Identifier.
    4. Add a new reference attribute of type Entity B Identifier to Entity A and a new reference attribute of type Entity A Identifier to Entity B.
30. **What is the Screen behaviour when a widget is not valid (Valid property set to False)?**
    1. The Screen displays the widget greyed out, and displays the validation error message on the input.
    2. The widget does not appear on the Screen and the validation message appears in its place.
    3. Displays the regular widget and displays the validation error message when we hover the mouse.
    4. Displays the regular widget, applies a specific styling (e.g. red border), and displays the validation error message.
31. **Which of the following options is not a built-in validation in OutSystems?**
    1. Mandatory Fields
    2. Maximum length of text fields
    3. Data types of input fields
32. **Which of the following options is correct regarding the Valid property of the Form?**
    1. The Valid property of the Form should be checked after the last custom validation.
    2. The Valid property of the Form is automatically changed to False when all the input fields of the Form are not valid.
    3. The Valid property of the Form should be explicitly set to False (e.g. with an Assign) when an input field is not valid.
    4. When built-in validations are enabled, the Valid property of the Form is automatically checked before executing the client action logic.
33. **In OutSystems, where can we place breakpoints?**
    1. In Actions only (Client-side and Server-Side)
    2. Server-side logic only
    3. Client-side logic only
    4. In Actions and Variables
34. **In OutSystems, it is possible to inspect the values of variables while debugging.**
    1. True
    2. False
35. **Which of the following commands is not available in the OutSystems debugger?**
    1. Stop Debugging
    2. Continue Request
    3. Step Over
    4. Restart Debugging
36. **When debugging a consumer module, how do we guarantee that the execution stops on breakpoints defined in the producer module?**
    1. We just need to set breakpoints in the producer module. The execution will stop on its breakpoints automatically.
    2. We need to also start the debugger on the producer module.
    3. Nothing, just leave Service Studio open.
    4. In the producer, set the Entry Module property to the consumer module.
37. **Considering Users and Roles in OutSystems, which of the following options is correct?**
    1. By default, end-users are managed in the built-in Users application.
    2. End-users can only be created programmatically, using Actions from the Users application.
    3. There are three built-in roles in OutSystems: Anonymous, AppUser and Registered.
    4. All users, with or without a login, have automatically the Registered Role.
38. **In OutSystems, how do we restrict access to a Screen?**
    1. Go to the Users application and associate the Screen to a specific role.
    2. Tick the Roles with access in the Screen Properties.
    3. Use the CheckRole Action.
    4. We don’t. Only users with a username and password can access.
39. **Considering the built-in Role Actions, which of the following options is false?**
    1. The CheckRole Action checks if a user has that particular Role.
    2. The GrantRole Action allows to grant a Role to a user programmatically.
    3. The RevokeRole Action allows to remove a Role from a user programmatically.
    4. The CreateUserWithRole Action creates an end-user and assigns it the Role.
40. **Inside an Action flow…**
    1. … only one Exception Handler may exist.
    2. … it’s mandatory to have at least one Exception Handler.
    3. … the Exception Handler flow can’t intersect other flows.
41. **If we have multiple Exception Handlers in an Action flow and an Exception is raised...**
    1. … the execution is always moved to the Global Exception Handler.
    2. … the execution is moved to the Exception Handler that is most specific to the Exception.
    3. … the execution is moved to all Exception Handlers of the Action.
    4. … a Switch statement is needed to select which Exception Handler will continue the execution.
42. **Regarding Block Events, which of the following options is false?**
    1. Events can be defined at the Block or Screen level.
    2. Events allow to pass information from the Block’s scope to the parent scope.
    3. Events are triggered by a Block and handled by its parent.
    4. Two instances of a Block may use the same handler for the same event.
43. **In which of the following situations is it necessary to define a handler for a Block Event?**
    1. When the event has Input Parameters.
    2. When the Block has Placeholders.
    3. When the event Input Parameters are all mandatory.
    4. When the Event is set to mandatory.
44. **In which of the following situations is the On Parameters Changed Event triggered?**
    1. If the value of a Block Input Parameters changes inside a Client Action of the Block.
    2. The On Parameters Changed must be explicitly triggered by the parent of the Block
    3. When the parent of the Block changes the value of at least one of the Block Input Parameters.
45. **In OutSystems, a Block is a reusable UI component. Which of the following is NOT correct?**
    1. A Block promotes reusability, i.e. develop once, reuse many times.
    2. A Block encapsulates its own logic.
    3. A Block improves maintainability, i.e., change the design or functionality, affect all usages.
    4. A Block can only be reused once.
46. **A Block can be used...**
    1. Only inside other Screens.
    2. Inside Screens and Blocks, including itself.
    3. Inside Screens and Blocks, except on itself.
    4. Only inside other Blocks.
47. **Regarding Placeholders, which of the following options is correct?**
    1. A Placeholder reserves space in the interface to be allocated when the block is instantiated.
    2. When a Block with Placeholders is instantiated, it is mandatory to place at least one widget inside the placeholders.
    3. Placeholders can be added to Screens and Blocks.
    4. Only one placeholder may be added per Block.
48. **Which of the following options is correct regarding Client Variables?**
    1. The value of a Client Variable is shared among all logged-in users.
    2. Lists or Binary Data can also be stored on Client Variables.
    3. Client Variables should be used to store confidential information.
    4. Client Variables are useful to cache frequently accessed information.
49. **The value of a Site Property can be modified in Service Center to change the application behaviour at runtime.**
    1. True
    2. False
50. **Which of the following is a good use case for a Site Property?**
    1. Current user ID
    2. Total Stock Quantity of Products
    3. REST Web Service API Key
    4. Search Keyword
51. **Which of the following events is not available in Screens or Blocks?**
    1. Initialize
    2. Ready
    3. After Fetch
    4. Render
52. **Considering the Initialize event of a Screen, which of the following would be the best use case for that event?**
    1. Retrieve data from the server database.
    2. Act on data returned by a Data Action.
    3. Manipulate the DOM.
    4. Set the default value of a Local Variable.
53. **Which of the following is the correct order of occurrence of events in a Screen?**
    1. Initialize, Ready, Render, Destroy.
    2. Initialize, Destroy, Ready, Render.
    3. Ready, Initialize, Render, Destroy.
    4. Initialize, Render, Ready, Destroy.