AWS Certified Alexa Skill Builder – Specialty

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Exam Simulator JSON Questions

1.) A skill builder includes a Standard card in her JSON response using the JSON shown below. When testing the skill via the Test tab on the Alexa Developer console, she notices that the card image doesn't display. What would cause the image to not display properly?

```
1     {
2       "version": "1.0",
3       "response": {
4         "outputSpeech": {
5           "type": "PlainText",
6           "text": "Your hotel room was booked successfully!"
7         },
8         "card": {
9           "type": "Standard",
10          "title": "Booking a Hotel Room",
11          "text": "You've successfully booked your hotel room. Your
                confirmation number is: 23RFGN.",
12          "image": {
13            "smallImageUrl": "https://hotelbooking.com/resources/card
                -images/hotel-small.gif",
14            "largeImageUrl": "https://hotelbooking.com/resources/card
                -images/hotel-large.gif"
15          }
16        }
17      }
18    }
```

A.) Standard card cannot display images, use a Simple card instead

B.) A Standard card cannot be tested via the Alexa Developer console, use the Amazon Alexa companion app instead

C.) The attributes names are incorrect, use `smallImage` and `largeImage` instead

D.) The image URLs reference images that are not in one of the supported formats (PNG or JPEG)

2.) A skill builder has extended the AMAZON.StopIntent built-in intent to support additional stop phrases. When testing the additional phrases, instead of exiting the skill, an error occurs. When reviewing the JSON below, what would cause the skill to error?

```json
1 ▾ {
2 ▾   "response": {
3 ▾     "outputSpeech": {
4       "type": "SSML",
5       "ssml": "<speak><voice name=\"Giorgio\">You've made a great
            choice adventurer. You Wealth decreases by 10 but your
            energy increases by 5. </voice> You hear commotion and
            church bells ringing <audio src=\"soundbank://soundlibrary
            /musical/amzn_sfx_church_bell_1x_05\"/> Look it's in Saint
            Peter's square. Do you see what's going on, yes or no
            ?</speak>"
6       },
7 ▾     "directives": [
8         ". . ."
9       ],
10 ▾    "reprompt": {
11 ▾      "outputSpeech": {
12         "type": "SSML",
13         "ssml": "<speak>Do not stall adventurer! Please answer yes
              or no. If you need a travel tip, say speak to the guide
              .</speak>"
14       }
15     },
16     "shouldEndSession": false,
17     "type": "_DEFAULT_RESPONSE"
18   }
19 }
```

A.) The skill builder hasn't implemented a handler in the skill's code for the AMAZON.CancelIntent

B.) The shouldEndSession flag should not be present in the response

C.) The skill builder hasn't routed the AMAZON.StopIntent to the AMAZON.CancelIntent

D.) The shouldEndSession flag should be set to true

3.) A skill builder is testing a skill he developed that streams music. The skill builder sends the PlaybackNearlyFinished directive to Alexa when he is ready to add the next stream to the queue. An example of the JSON returned to Alexa from the skill is shown below. While testing, the skill builder hears, "there was a problem with the requested skill's response." What would cause this error?

```json
{
  "version": "string",
  "sessionAttributes": {
    "key": "value"
  },
  "response": {
    "outputSpeech": {
      "type": "PlainText",
      "text": "The music is about play. Can I help you with
        anything else?"
    },
    "card": {
      "type": "Simple",
      "title": "Music",
      "content": "The song Hello World is playing."
    },
    "reprompt": {
      "outputSpeech": {
        "type": "PlainText",
        "text": "Can I help you with anything else?"
      }
    },
    "directives": [
      {
        "type": "AudioPlayer.PlaybackNearlyFinished",
        "requestId": "amzn1.echo-api.request.b84",
        "timestamp": "2020-01-17T19:54:38Z",
        "token": "EDFR345",
        "offsetInMilliseconds": 0,
        "locale": "en-US"
      }
    ],
    "shouldEndSession": false
  }
}
```

A.) The skill builder should return AudioPlayer.PlaybackFinished instead

B.) The skill builder should not send outputSpeech, card, or reprompt objects with the response

C.) The skill builder should send AudioPlayer.ClearQueue first to clear the playback queue'

D.) The skill builder should include multiple reprompts so the session doesn't timeout'

4.) A skill builder has developed a custom skill that streams music. The skill builder uses the AudioPlayer.Play directive to send Alexa a command to stream the audio file identified by the specified audioItem. When testing, the skill builder notices that when the AudioPlayer.Play directive is sent to play the next song, the current song is interrupted,

and the next song begins playing immediately instead of waiting for the current song to finish. Review the JSON below and determine how the issue can be corrected?

```json
{
    "version": "1.0",
    "sessionAttributes": {},
    "response": {
        "outputSpeech": {
            "type": "PlainText",
            "text": "Playing the requested song."
        },
        "card": {
            "type": "Simple",
            "title": "Play Audio",
            "content": "Playing the requested song."
        },
        "reprompt": {
            "outputSpeech": {
                "type": "PlainText",
                "text": null
            }
        },
        "directives": [
            {
                "type": "AudioPlayer.Play",
                "playBehavior": "REPLACE_ALL",
                "audioItem": {
                    "stream": {
                        "token": "jdhd7283",
                        "url": "https://my-audio-hosting-site.com/audio/song.mp3",
                        "offsetInMilliseconds": 0
                    }
                }
            }
        ],
        "shouldEndSession": true
    }
}
```

A.) Change playBehavior from REPLACE_ALL to ENQUEUE

B.) Change the audioItem offsetInMilliseconds attribute from 0 to 3000

C.) Change shouldEndSession from true to false

D.) Send the AudioPlayer.Pause directive instead of AudioPlayer.Play

5.) What type of request is sent when your skill sends a purchase suggestion for one of your in-skill products? For example, Alexa would say, "*If you'd like more adventures to play, you can now get the Word Jumble expansion pack. Do you want to learn more?*"

```
 1 ▾ {
 2 ▾   "directives": [
 3 ▾     {
 4          "type": "Connections.SendRequest",
 5          "name": "Buy",
 6 ▾        "payload": {
 7 ▾          "InSkillProduct": {
 8              "productId": "amzn1.adg.product.aaaaaaaa-bbbb-cccc-dddd
                  -eeeeeeeeeee"
 9            }
10          },
11          "token": "correlationToken"
12        }
13      ]
14 }
```

A.

```
 1 ▾ {
 2 ▾   "directives": [
 3 ▾     {
 4          "type": "Connections.SendRequest",
 5          "name": "Upsell",
 6 ▾        "payload": {
 7 ▾          "InSkillProduct": {
 8              "productId": "amzn1.adg.product.aaaaaaaa-bbbb-cccc-dddd
                  -eeeeeeeeeee"
 9            },
10            "upsellMessage": "This is my product...Do you want to know
                  more?"
11          },
12          "token": "correlationToken"
13        }
14      ]
15 }
```

B.)

```
 1 ▾ {
 2 ▾   "directives": [
 3 ▾     {
 4          "type": "Connections.SendRequest",
 5          "name": "Purchase",
 6 ▾        "payload": {
 7 ▾          "InSkillProduct": {
 8              "productId": "amzn1.adg.product.aaaaaaaa-bbbb-cccc-dddd
                  -eeeeeeeeeee"
 9            },
10            "upsellMessage": "This is my product...Do you want to know
                  more?"
11          },
12          "token": "correlationToken"
13        }
14      ]
15 }
```

C.)

```
1 ▾ {
2 ▾   "directives": [
3 ▾     {
4         "type": "Connections.SendRequest",
5         "name": "Entitle",
6 ▾       "payload": {
7 ▾         "InSkillProduct": {
8             "productId": "amzn1.adg.product.aaaaaaaa-bbbb-cccc-dddd
                -eeeeeeeeeee"
9           },
10          "upsellMessage": "This is my product...Do you want to know
              more?"
11        },
12        "token": "correlationToken"
13      }
14    ]
15 }
```

D.)

6.) A skill builder is developing a multi-modal skill using the Alexa Presentation Language (APL). The skill builder will only send an APL document to devices with a screen. How can the skill builder determine if the device has a screen?

A.) Review the Context object

B.) Review the Session object

C.) Review the System object

D.) Review the Request object

7.) A skill builder has developed a news audio streaming skill with playback controls that highlight noteworthy news from around the globe. The skill builder has enabled the AudioPlayer interface to support streaming of the content. The AudioPlayer interface sends requests to notify the skill about changes to the audio's playback state.

For example, when the user starts playing the news, the AudioPlayer request below is sent:

```
 1 ▾ {
 2
 3      "version": "string",
 4
 5 ▾    "context": {
 6
 7 ▾      "System": {
 8
 9          "application": {...},
10
11          "user": {...},
12
13          "device": {...}
14
15        }
16
17      },
18
19 ▾    "request": {
20
21        "type": "AudioPlayer.PlaybackStarted",
22
23        "requestId": "amzn1.echo-api.request.517e5add-b330-4f5c-b819-384798754fs32",
24
25        "timestamp": "2020-02-14T15:56:26Z",
26
27        "token": "223ls934xya",
28
29        "offsetInMilliseconds": 0,
30
31        "locale": "en-US"
32
33      }
34
35 }
```

The skill then responds to the AudioPlayer request with the JSON below:

```
 1 ▾ "body": {
 2        "version": "1.0",
 3 ▾      "response": {
 4 ▾        "outputSpeech": {
 5            "type": "SSML",
 6            "ssml": "<speak>Playback has started</speak>"
 7          },
 8              "directives": [...],
 9 ▾        "reprompt": {
10 ▾          "outputSpeech": {
11              "type": "SSML",
12              "ssml": "<speak>Do you like this song?</speak>"
13            }
14          },
15          "shouldEndSession": false,
16          "type": "_DEFAULT_RESPONSE"
17        },
18        "sessionAttributes": {}
19      }
20
```

The above response to the AudioPlayer request causes the skill to error. How can the error be corrected?

A.) Remove the reprompt object

B.) Remove the outputSpeech object

C.) Set shouldEndSession to true

D.) Change the type from SSML to PlainText and remove the <speak> tag

8.) The following JSON defines a custom slot type named SOUND_TYPE with two values.

```
 1  {
 2    "types": [
 3      {
 4        "name": "SOUND_TYPE",
 5        "values": [
 6          {
 7            "id": "OCEAN",
 8            "name": {
 9              "value": "ocean",
10              "synonyms": [
11                "waves",
12                "beach"
13              ]
14            }
15          },
16          {
17            "id": "RAIN",
18            "name": {
19              "value": "rain",
20              "synonyms": [
21                "shower",
22                "storm",
23                "downpour",
24                "rainstorm"
25              ]
26            }
27          }
28        ]
29      }
30    ]
31  }
```

Assuming that when a user says, "play rainstorm sounds," an intent is matched and the SOUND_TYPE slot is populated, identify the canonical value that will be returned.

A.) RAIN

B.) rain

C.) rainstorm

D.) ocean

9.) A skill builder is testing a Standard card that is sent from her skill via the JSON code below.

```
1    {
2      "version": "1.0",
3      "response": {
4        "outputSpeech": {
5          "type": "PlainText",
6          "text": "Your Ride Hailer car is on the way!"
7        },
8        "card": {
9          "type": "Standard",
10         "title": "Ordering a Car",
11         "text": "Your ride is on the way to 123 Main
             Street!\nEstimated cost for this ride: $25",
12         "image": {
13           "smallImageUrl": "https://ridehailer.com/resources/card
               -images/race-car-small.png",
14           "largeImageUrl": "https://ridehailer.com/resources/card
               -images/race-car-large.png"
15         }
16       }
17     }
18   }
```

The skill builder notices a blank space displays instead of the card image. What could cause this issue?

A.) the images referenced aren't publicly available

B.) the image file is stored somewhere other than Amazon S3

C.) the user hasn't granted the necessary permissions to the skill

D.) the file size for the image provided is too large

10.) A skill builder is developing a multi-modal skill and is testing the skill via the Alexa Simulator on the Test tab of the Alexa Developer Console. The skill should show text with a background image and no foreground images. The skill builder has selected Small Hub (Round 480 x 480) to indicate testing on an Echo Spot and notices the display is blank. Looking at the JSON below, how can this issue be resolved?

```
 1  {
 2    "directives": [
 3      {
 4        "type": "Display.RenderTemplate",
 5        "template": {
 6          "type": "BodyTemplate2",
 7          "token": "string",
 8          "backButton": "VISIBLE",
 9          "backgroundImage": "https://www.example.com/background
                -image1.png",
10          "title": "My Favorite Car",
11          "textContent": {
12            "primaryText": {
13              "text": "See my favorite car",
14              "type": "PlainText"
15            },
16            "secondaryText": {
17              "text": "Custom-painted",
18              "type": "PlainText"
19            },
20            "tertiaryText": {
21              "text": "By me!",
22              "type": "PlainText"
23            }
24          }
25        }
26      }
27    ]
28  }
```

A.) Enable the Alexa Presentation Language interface via the Alexa Developer Console

B.) Use BodyTemplate3 instead of BodyTemplate2

C.) Add <div align = 'center'> tag to the text field of the primaryText attribute

D.) Use BodyTemplate1 instead of BodyTemplate2

===

Answers

1.) **D** - A Standard card displays text and an image by including an image object with smallImageUrl and largeImageUrl properties in the JSON response. The image files you provide must be hosted on an HTTPS endpoint. There are some common issues that may occur when you include an image in a Standard card. In this case, the is not in one of the supported image formats of PNG or JPEG. Simple and standard card types can be tested via the console.

References:

- Include a Card in Your Skill's Response - https://developer.amazon.com/en-US/docs/alexa/custom-skills/include-a-card-in-your-skills-response.html

- Common issues when including images in standard cards - https://developer.amazon.com/en-US/docs/alexa/custom-skills/include-a-card-in-

your-skills-response.html#common-issues-when-including-images-in-standard-cards
- Create a card to display text and an image - https://developer.amazon.com/en-US/docs/alexa/custom-skills/include-a-card-in-your-skills-response.html#create-a-card-to-display-text-and-an-image

2.) **D** - When implementing the AMAZON.StopIntent, shouldEndSession must be true or null in the response. For A.), the skill builder is using AMAZON.StopIntent, not AMAZON.CancelIntent. For B.), the flag must be present and set to true or null. For option C.), this is not an efficient way to handle this requirement.

References:
- About canceling and stopping - https://developer.amazon.com/en-US/docs/alexa/custom-skills/standard-built-in-intents.html#about-canceling-and-stopping
- Stopping and Canceling - https://developer.amazon.com/en-US/docs/alexa/custom-skills/voice-interface-and-user-experience-testing-for-a-custom-skill.html#cert-stop-and-cancel
- Response Object - https://developer.amazon.com/en-US/docs/alexa/custom-skills/request-and-response-json-reference.html#response-object

3.) **B** - This error means there was an issue with the response your skill sent back to Alexa and causes the skill to end the session. This means that the response JSON your skill sent back was malformed. Specifically, for PlaybackNearlyFinished, your skill can respond with any AudioPlayer directive. However, the response cannot include any standard properties such as outputSpeech, card, or reprompt. Sending a response with unsupported properties causes an error. This JSON-formatted response must comply with a response format specific to Alexa.

References:
- PlaybackNearlyFinished request - https://developer.amazon.com/en-US/docs/alexa/custom-skills/audioplayer-interface-reference.html#playbacknearlyfinished
- AudioPlayer Interface Reference - https://developer.amazon.com/en-US/docs/alexa/custom-skills/audioplayer-interface-reference.html
-

4.) **A** - When playing music, use the playBehavior parameter to determine what happens with the stream. Use, REPLACE_ALL to immediately begin playback of the specified stream, and replace current and enqueued streams. Use ENQUEUE to add the specified stream to the end of the current queue. This does not impact the currently playing stream.

Use REPLACE_ENQUEUED to replace all streams in the queue. This does not impact the currently playing stream. For option B, offsetInMilliseconds is used to indicate the timestamp in the stream from which Alexa should begin playback. For option C, when sending a Play directive, you normally set the shouldEndSession flag in the response object to true to end the session. If you set this flag to false, Alexa sends the stream to the device for playback, then immediately pauses the stream to listen for the user's response. For option D, there is no AudioPlayer.Pause directive in the AudioPlayer interface.

References:

- New Alexa Skills Kit (ASK) Feature - Audio Streaming in Alexa Skills - https://developer.amazon.com/blogs/post/Tx1DSINBM8LUNHY/New-Alexa-Skills-Kit-ASK-Feature-Audio-Streaming-in-Alexa-Skills
- Parameters - https://developer.amazon.com/en-US/docs/alexa/custom-skills/audioplayer-interface-reference.html#play-params

5.) **B** - When you want to respond to a user intent with a purchase suggestion, you send a Connections.SendRequest directive to Alexa that indicates a purchase suggestion by specifying an upsell. When sending an upsell, you must provide the identifier for the suggested product, a message prompt for the purchase suggestion, the upsell message, a token to store the current state of the skill or other relevant information.

Resources:

- Add ISP Support to Your Skill Code - https://developer.amazon.com/en-US/docs/alexa/in-skill-purchase/add-isps-to-a-skill.html
- Understanding the In-Skill Purchasing Experience - https://developer.amazon.com/blogs/alexa/post/53c2319a-4cc9-4067-8274-1472a0463d6e/understanding-the-in-skill-purchasing-experience

6.) **A** - The Context object provides your skill with information about the current state of the Alexa service and device at the time the request is sent. The Context object contains a device attribute that provides information about the device used to send the request. The device object contains both deviceId and supportedInterfaces properties.

```json
1   {
2     "version": "1.0",
3     "session": {
4       "new": true,
5       "sessionId": "amzn1.echo-api.session.0000000-0000-0000-0000-00000000000",
6       "application": {
7         "applicationId": "amzn1.echo-sdk-ams.app.000000-d0ed-0000-ad00-000000d00ebe"
8       },
9       "attributes": {},
10      "user": {
11        "userId": "amzn1.account.AM3B00000000000000000000000"
12      }
13    },
14    "context": {
15      "System": {
16        "application": {
17          "applicationId": "amzn1.echo-sdk-ams.app.000000-d0ed-0000-ad00-000000d00ebe"
18        },
19        "user": {
20          "userId": "amzn1.account.AM3B00000000000000000000000"
21        },
22        "device": {
23          "deviceId": "string",
24          "supportedInterfaces": {
25            "AudioPlayer": {}
26          }
27        }
28      },
29      "AudioPlayer": {
30        "offsetInMilliseconds": 0,
31        "playerActivity": "IDLE"
32      }
33    },
34    "request": {
35      "type": "LaunchRequest",
36      "requestId": "amzn1.echo-api.request.0000000-0000-0000-0000-00000000000",
37      "timestamp": "2015-05-13T12:34:56Z",
38      "locale": "string"
39    }
40  }
```

References:

- Request and Response JSON Reference - https://developer.amazon.com/en-US/docs/alexa/custom-skills/request-and-response-json-reference.html
- Context Object - https://developer.amazon.com/en-US/docs/alexa/custom-skills/request-and-response-json-reference.html#context-object

7.) **B** - The outputSpeech object is used for setting both the outputSpeech and the reprompt properties. The outputSpeech object should only be included when sending a response to a CanFulfillIntentRequest, LaunchRequest, IntentRequest, Display.ElementSelected request or an InputHandlerEvent. The outputSpeech object should not be sent when you return a response to a SessionEndedRequest. PlaybackController and AudioPlayer requests can only be responded to with an AudioPlayer directive. Furthermore, you can handle these requests to understand what is happening with the audio stream and you can optionally choose to respond. If your skill responds, it can only respond with AudioPlayer directives (Play, Stop and ClearQueue).

References:

- OutputSpeech Object - https://developer.amazon.com/en-US/docs/alexa/custom-skills/request-and-response-json-reference.html#outputspeech-object

- New Alexa Skills Kit (ASK) Feature - Audio Streaming in Alexa Skills https://developer.amazon.com/blogs/post/Tx1DSINBM8LUNHY/New-Alexa-Skills-Kit-ASK-Feature-Audio-Streaming-in-Alexa-Skills

8.) **B** - Even though the user used the word "rainstorm", the canonical slot value contains the more general "rain" value because "rainstorm" is defined as a synonym. RAIN is returned as the values id.

References:

- Define Synonyms and IDs for Slot Type Values (Entity Resolution) - https://developer.amazon.com/en-US/docs/alexa/custom-skills/define-synonyms-and-ids-for-slot-type-values-entity-resolution.html

9.) **A & D** - There are several reasons that an image might not display in a Standard card. The image URLs should point to actual images that are publicly available. If S3 is used, be sure to make the image files public and non-expiring. The server hosting the images should not be CORS-enabled. The images must be in one of the supported formats (PNG or JPEG). Lastly, the image files must not be too large.

References:

- Common issues when including images in standard cards - https://developer.amazon.com/en-US/docs/alexa/custom-skills/include-a-card-in-your-skills-response.html#common-issues-when-including-images-in-standard-cards

10.) **D** - Use BodyTemplate1 to show only text with background image and no foreground images.

References:

- Test for Screen-Based Interaction Issues in Your Alexa Skill - https://developer.amazon.com/en-US/docs/alexa/custom-skills/certification-issues-screen.html
- Use the Alexa simulator with custom and smart home skills - https://developer.amazon.com/en-US/docs/alexa/devconsole/test-your-skill.html#use-simulator