**Assignment Tasks -3**

**1.How does Alexa works?**

**1.** When a user speaks to a device with Alexa, the speech is streamed to the Alexa service in the cloud. Alexa recognizes the speech, determines what the user wants, and then sends a structured request to the particular skill that can fulfil the user's request. All speech recognition and conversion is handled by Alexa in the cloud. Every Alexa skill has an interaction modeldefining the words and phrases users can say to make the skill do what they want. This model determines how Alexa communicates with your users.

In the context of Alexa, an interaction model is somewhat analogous to a graphical user interface in a traditional app. Instead of clicking buttons and selecting options from dialog boxes, users make their requests and respond to questions by voice. When users speak questions and make requests, Alexa uses the interaction model to interpret and translate the words into a specific requestthat can be handled by a particular skill. The request is then sent to the skill.

You define your own interaction model when creating a custom skill. The Smart Home Skill API, Video Skill API, Music Skill API, and others provide a built-in interaction model. When Alexa communicates with your skill's web service, user requests and corresponding responses are transmitted over the internet. To protect the confidentiality and integrity of this data, Alexa strictly enforces that HTTP connections are secured using SSL/TLS. This means that the web service for a skill that is published to users must present a valid and trusted certificate when the connection is established, and must possess the corresponding private key. You need to specify which type of SSL certificate your web service uses.

Amazon Alexa works

Alexa is built based on natural language processing (NLP), a procedure of converting speech into words, sounds, and ideas.

* Amazon records your words. Indeed, interpreting sounds takes up a lot of computational power, **the recording of your speech is sent to Amazon’s servers to be analysed**more efficiently.
* Amazon breaks down your “orders” into individual sounds. It then consults a database containing various words’ pronunciations to **find which words most closely correspond to the combination of individual sounds**.
* It then**identifies important words to make sense of the tasks** and carry out corresponding functions. For instance, if Alexa notices words like “sport” or “basketball”, it would open the sports app.
* **Amazon’s servers send the information back to your device and Alexa may speak.** If Alexa needs to say anything back, it would go through the same process described above, but in reverse order

