**ASSESSMENT 50**

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| **Date:** | 17-07-2020 | **Name:** | Sheela Golasangi |
| **Course:** | Coursera | **USN:** | 4AL16EC068 |
| **Topic:** | Industrial IoT on Google Cloud Platform | **Semester & Section:** | VIII  ‘B’ |
| **Github Repository:** | Sheela-Course |  |  |

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| **FORENOON SESSION DETAILS** |
| REPORT C:\Users\india\Pictures\Screenshots\Screenshot (2017).png  **C:\Users\india\Pictures\Screenshots\Screenshot (2024).png**  **C:\Users\india\Pictures\Screenshots\Screenshot (2023).png**  **ANALYZING IOT DATAPREP**  **Introduction to the Dataprep Demo**  Next is a video demonstrating an integrated data pipeline. The video is from 2017, so some of the user interfaces in the video might be unfamiliar to you. That is okay; our main goal is to understand how Cloud Dataprep by Trifacta fits into an integrated data pipeline.  We are introducing it at the end of the course, when it is actually in the middle of the pipeline. Using the output from Cloud Dataprep is beyond the scope of this course; it will be included in an advanced IoT course.  **The Dataprep integrated pipeline**  https://d3c33hcgiwev3.cloudfront.net/imageAssetProxy.v1/OU34vvNOEeiAgQrXx6bp4g_2faa9d773f0f0f593be6ba9f7e556370_Screen-Shot-2018-11-28-at-12.42.39-PM.png?expiry=1595116800000&hmac=bKfeIpsl4_hCoMdSsjLGNsgG6PywyS_EeDDj6oxKndQ  In the video, the data pipeline collects data from New York City taxis using Cloud Pub/Sub and a Dataflow pipeline. The data is visualized as an overlay to a map of New York City, with green dots representing taxis. BigQuery is used to gather and explore the data set. It quickly becomes apparent that the data streaming in contains some errors and anomalies. If you are going to use it with Cloud ML Engine, you'll have to clean it up.  This is where Cloud Dataprep resides in the pipeline. You create recipes to transform and clean the data in preparation for Cloud ML Engine. The recipes will work on historical data and all data streaming into the pipeline. When the data is in a format acceptable to Cloud ML Engine, it will be used to generate, train, or update the ML model.  **Dataprep tasks in the data pipeline**  Cloud Dataprep completes a series of data transformations when it receives the data. Let's take a moment to discuss each aspect of the Dataprep transformations in the pipeline.  https://d3c33hcgiwev3.cloudfront.net/imageAssetProxy.v1/lOU89fNOEeilxxL_ZeRz_A_9a321c0fb293560f26fb30bd168629e8_Screen-Shot-2018-11-28-at-12.45.13-PM.png?expiry=1595116800000&hmac=TN6eo5Pqyj9Ubg0KAJs-wxMKxO0hn_jXmJupzvDcg8Y  Before the data can be used downstream in the pipeline, it must be cleaned up. The usual method for cleaning is a manual check and transform, which is not viable with real-time streaming data. Cloud Dataprep simplifies this process by automatically detecting schemas, types, joins, and anomalies. It also identifies duplicates so you can skip profiling your data and go right to the data analysis. Then you can visually explore and interact with data in seconds, which helps you instantly understand data distribution and patterns.  You don't have to write any code; using the user interface, you can quickly prepare data and work with common data sources of any size. Cloud Dataprep uses machine learning to make data transformation suggestions based on your usage pattern. Users can understand data instantly with visual data distributions. With each click of the mouse gesture in the UI, Cloud Dataprep suggests and predicts your next ideal data transformation. Before making a transformation, Cloud Dataprep shows you the changes you are requesting. This allows you to standardize, structure, and join datasets easily.  **Dataprep**  Cloud Dataprep is an integrated partner service that is operated by another company, Trifacta. Google works closely with Trifacta to provide a seamless user experience that removes the need for upfront software installation, separate licensing costs, or ongoing operational overhead.  https://d3c33hcgiwev3.cloudfront.net/imageAssetProxy.v1/we1DGNY2EeicewofXPb8fg_ab99e4b597c9c597a1d5160ca40f5316_Screen-Shot-2018-10-22-at-1.11.31-PM.png?expiry=1595116800000&hmac=T6Y0CWvQjrVgU-utTTmHR5fTnGF5qf-XhxZ_U1ENErs  Cloud Dataprep is built on Cloud Dataflow, which means it is auto-scalable to any size and can easily process massive data sets. This also means it is fully integrated with Google Cloud Platform, so there is no infrastructure to deploy or manage. It can access raw data from BigQuery, Cloud Storage, or local files. The data can be in CSV, JSON, or a relational table format. Refined data can be directly ported into BigQuery, Data Studio, Cloud Storage, or Cloud ML Engine for further analysis and storage.  **Flow Structure and Objects**  When working in Dataprep, the basic unit for organizing your work is the called the flow. The following diagram illustrates the component objects of a flow and how they are related:  https://d3c33hcgiwev3.cloudfront.net/imageAssetProxy.v1/4kzjMdZEEeicewofXPb8fg_d83ecee0af2ec8bd087ef353f01706c1_Screen-Shot-2018-10-22-at-2.50.57-PM.png?expiry=1595116800000&hmac=WkXIcWXwCUXwg_izeI-7XVxWgYUKH8nKZ3hz4HgHUpc  **Flow**  When you start Dataprep, you need to import the dataset you want to use. The flow created with this dataset holds the recipes and other objects associated with the it.  The actions you can perform on these objects are:   * Create relationships between dataset, their recipes, and other datasets. * Copy datasets * Execute pre-configured jobs * Import Datasets - datasets are pointers to the data source. Dataprep cannot modify or store data.   **Recipe**  Recipes are a sequence of steps that can transform a dataset. You build recipes on the Transformer page, using a sample of the dataset.  You use the Dataprep UI to generate the steps. The Dataprep turns the recipe into commands that are used to transform the sampled dataset. As you build or modify your recipe, the results of each command is instantly performed on the sample. So it is very quick and easy to iterate on your recipe.  **Run Jobs**  You execute your recipes by running a job. There are two types of jobs:   * Transform job: the recipe you developed on a sample of the dataset is applied to transform your entire dataset. * Profile job: you generate a visual profile of your transformed dataset. The insights you gain about your dataset can help you refine your recipe.   When a job is done, you can view the results on the job results page.  **Job results page**  You can use the job results to explore an executed job. The actions that are available are:   * View Datasources: you can review the data sources that were used by the job. * View Parameters **-**if you used parameters in your job, you can review how they are applied to the dataset. * View Dependencies- you can view the datasets and recipes you added to the flow. * Export Results - you can export the results of a job either locally or to the cloud.   I have included a video called "Getting Started 101 - Cloud Dataprep Basics". It's a six minute demo on using Dataprep. |

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| **Topic:** | Build an App to Track Your Trailblazer Journey | **Semester & Section:** | VIII  ‘B’ |
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| **AFTERNOON SESSION DETAILS** | | | |
| C:\Users\User\Pictures\Screenshots\Screenshot (313).pngC:\Users\User\Pictures\Screenshots\Screenshot (314).pngC:\Users\User\Pictures\Screenshots\Screenshot (315).pngLearning Objectives In this project, you’ll:   * Discover the types of roles available in the Salesforce ecosystem. * Create an app to track what you’re learning as you discover Salesforce ecosystem opportunities. * Add a custom object, custom fields, a report, and a report chart to your app. * Learn how to use your app on a mobile device.  Hello. We’re Salesforce. It’s nice to meet you. We’re Salesforce, a cloud computing pioneer, and as a global, fast-growing company, we now help companies worldwide to connect with their customers. We’re a customer company, meaning we put our customers at the center of everything we do. And what we sell helps other companies do that, too.  We view our customers, partners, employees, and communities as part of our family (we use the word “Ohana”). We’re a values-driven company, and we give back through our [1-1-1 model](https://www.salesforce.org/), which means we donate 1% of our product, 1% of our time, and 1% of our resources to nonprofit organizations. You can learn more about our culture and values in the [SalesforceOhana Culture](https://trailhead.salesforce.com/en/content/learn/modules/manage_the_sfdc_way_ohana" \t "_blank) badge.  Founded in 1999 in San Francisco, Salesforce has grown at a phenomenal rate to become the world’s fourth-largest software company (at the time of this writing).  As part of our growth, an ecosystem of other companies, users, and experts extends beyond our own employees to help companies use Salesforce. So even if you don’t work for Salesforce in the future, you could very well get a job working with Salesforce. And that’s what the Salesforce ecosystem is all about. Meet the Salesforce Ecosystem As businesses embrace the future of mobile, robotics, IoT, and AI, Salesforce skills are becoming some of the hottest skills to have on your resume, and that demand is growing. In fact, [according to IDC](https://www.salesforce.com/blog/2017/10/salesforce-economy-idc-study-2022), Salesforce and our broader ecosystem will create over 3 million jobs by 2022.  So as you are exploring career opportunities, it’s important to consider which jobs and industries are experiencing the highest growth. The next step is to review the roles themselves and determine which ones match up best with your interests. Download the Free Career Exploration Resources Pack Not sure what type of role interests you? Do the worksheets in our free career exploration resources pack and discover more about your career goals and interests. Create the Object ModelTrack Your Discoveries In the previous step, you found a number of web pages for careers in the Salesforce ecosystem. As you continue on your journey, you’re going to find other resources you want to track, like blogs, websites, podcasts, events, and more. So let’s build an app on the Salesforce Platform to track all of those resources. Build a Custom Object Start by creating a custom object, Discovery, to track all of the resources you discover on your learning journey.   1. Click Setup and select **Setup**. 2. Click **Object Manager**. 3. Click **Create** and select **Custom Object**. 4. Create an object as follows:    * Label: Discovery    * Plural Label: Discoveries    * Object Name: Discovery    * Record Name: Discovery Name    * Under Optional Features, select **Allow Reports.**    * Under Object Creation Options (available only when a custom object is first created), select **Launch New Custom Tab Wizard after saving this custom object**. 5. Click **Save**.   This directs you to the New Custom Object Tab screen. Next, let’s make the tab. Make a Custom Tab If the tab wizard didn’t automatically launch, that’s OK. Enter Tabs in Quick Find and select **Tabs**. In the Custom Object Tabs section, click **New**.  Follow these steps to create a tab for your custom object.   1. If it isn’t already selected, for Object, select **Discovery**. 2. Click **Tab Style** and choose any image. How about a compass? 3. Click **Next**, **Next**, and **Save**.  Use Your App on the GoTake It on the Road Your app is created! The final step is to make sure you can add discoveries to your app from your mobile device, so that no matter where you are, you can keep track of great resources you find related to your Salesforce journey. Create a User Create a username and password you will remember, so you can sign in to Salesforce mobile and use your new app.   1. From Setup, enter Users in Quick Find and select **Users**. 2. Click **New User**. 3. Create a new user as follows:    * Enter your first and last name.    * Enter a unique alias.    * Enter a valid email address.    * Enter a unique username. Your username should be formed like an email address, but it does not need to be a valid email address. For example, you can create a username like anyname@mycareer.com or anything@notarealemail.com.    * Enter a unique nickname.    * For User License, select **Salesforce**, then for Profile, select **System Administrator**. If a Salesforce license isn't available, select the **Salesforce Platform** license and the **Salesforce Platform User** profile.    * For Role, select **CEO**. 4. Click **Save.** 5. Check your email for an activation email. Click the link in the email and set your password.   Now you have a username and password to access your app easily. Install the Salesforce Mobile App Always run the mobile app on a device that meets minimum platform [requirements](https://help.salesforce.com/HTViewHelpDoc?id=sf1_requirements.htm&language=en_US). If you have an Android or iOS device that meets the minimum requirements, you can use the downloadable Salesforce mobile app available from the App Store® or Google Play™.  Once you have the app installed on your mobile device, use the username and password you created to sign in.  If you are unable to install the app, run the browser version of the mobile app by opening a browser window on your mobile device and logging in at login.salesforce.com. | | | |