

Assignment Five:

1. Create Four global attribute (Data Type)
 - a. partClassification (String)
 - b. isDrawing (Boolean)
 - c. releaseDate (DateAndTime)
 - d. height (real number)
2. Use these attributes in the wt.part.WTPart Object.
3. Create some Part objects, and populated these attributes.
4. Create SQL query for joins as well:
 - a. From StringDefinition join StringValue join WTPartMaster join WTPart
 - b. From booleanDefinition join booleanValue join WTPartMaster join WTPart
 - c. From integerDefinition join integerValue join WTPartMaster join WTPart
 - d. From timestampDefinition join timestamValue join WTPartMaster join WTPart

Solution:

1. Create Four global attribute (Data Type)
 - a. partClassification (String)
 - b. isDrawing (Boolean)
 - c. releaseDate (DateAndTime)
 - d. height (real number)

Step1: login as a site admin->utility->business administration->type and Attribute Management. The page appears shown below

The screenshot shows the 'Type and Attribute Management Utility' interface. The sidebar on the left contains a tree view with the following items: 'Manage Types', 'Role Resource', 'Saved Search', 'Schedule', 'Search History', 'Subscription', 'Summary Activity (Classic)', 'Supersede', 'Task Form Template', 'Technical Data Package', 'Technical Data Package Master', 'Text Agenda', 'Text Minutes', 'Traditional Meeting', 'Translation Link', 'Typed Iterated Resource', 'User', 'Uses Occurrence Attributes', 'Variance', 'Variant Specification', 'View Specific Data', 'View Specific Data Link', 'Work Item', 'Work Set', 'Work Set Component Link', 'Work Set Reference Document Link', 'wt.changeAction.ChangeActionC', 'wt.filter.custom.CustomFilter', 'wt.meeting.AgendaDocumentLin', 'wt.meeting.MinutesDocumentLin', 'Xiff Link', 'Manage Global Enumerations', 'Manage Reusable Attributes', 'Manage Measurement Systems', and 'Manage Quantities of Measure'. The main content area has a green header 'Welcome to the Type and Attribute Management Utility'. Below this, there are four sections: 'Manage Types' (Create and manage types and subtypes, attributes, and attribute layouts), 'Relationship Constraints' (Define the set of valid object-to-object relationships for constrainable link types), 'Help' (Click the ? icon to get context-sensitive information on each area of the Type and Attribute Management utility), and 'Manage Global Enumerations' (Create, edit, and delete value lists for use by multiple attributes). The 'Manage Reusable Attributes' section is also visible, stating 'Create and edit new attribute definitions that can be used to define attributes in Windchill.' The 'Manage Measurement Systems' section states 'Define new measurement systems to meet business needs.' The 'Manage Quantities of Measure' section states 'Define new quantities of measure and override existing display units.' On the right, there is a 'Type - Part Usage' panel with fields for 'Internal Name' (wt.part.WTPartUsageLink), 'Display Name' (Part Usage), and 'Description' (Part Usage). It also has a 'Status' dropdown set to 'Active' and a 'Subtypes' field with a value of 2. Below this is a table with columns 'Name', 'Internal Name', and 'Filterable'. The table lists various attributes and their filterable status. The table has 21 objects selected.

Name	Internal Name	Filterable
Application Tag	sourceIdentification.applicationTag	No 1
Assigned Document Expression	partDocumentDesignExpression	No 2
Assigned Usage Expression	partUsageDesignExpression	No 2
Build Status	buildStatus	No 2
Component ID	componentId	No 2
Created On	thePartCreationTimestamp	No 2
Inclusion Option	inclusionOption	No 2
Last Modified	thePartLastModifiedTimestamp	No 2
Line Number	lineNumber	Yes 1
Operation Allocation	allocationType	No 2
Quantity	quantity	Yes 1
Quantity Option	quantityOption	No 2
Reference Designator	referenceDesignator	No 2
Trace Code	traceCode	No 2
Unique ID	sourceIdentification.uniqueId	No 2
Unit	quantityUnit	Yes 2
Unit	unit	No 2
Unit	unit	No 2

Step2: select Manage Reusable Attributes->root->r/c->New Attribute organizer

The screenshot shows the 'Type and Attribute Management Utility' interface. On the left, a tree view under 'Root' shows 'New Attribute Organizer' selected. The main area displays a 'Welcome to the Type and Attribute Management Utility' message. Below this, there are sections for 'Manage Reusable Attributes', 'Manage Global Enumerations', 'Manage Measurement Systems', and 'Manage Quantities of Measure'. On the right, a 'Type - Part Usage' dialog box is open, showing fields for 'Internal Name', 'Display Name', 'Description', 'Status', 'Subtype', and 'Attributes'. The 'Attributes' section is expanded, showing a list of attributes with columns for 'Name', 'Internal Name', and 'Filterable'.

Step3: fill required fields as shown below->Apply (it create a folder).

The screenshot shows the 'New Attribute Organizer' dialog box. The 'Internal Name' field is filled with 'PLM', the 'Display Name' field is filled with 'plm', and the 'Description' field is empty. The 'Status' field is set to 'Active'. The 'Subtype' field is set to 'Part Usage'. The 'Attributes' section is expanded, showing a list of attributes with columns for 'Name', 'Internal Name', and 'Filterable'. The 'Apply' button is highlighted.

The screenshot displays the Windchill Type and Attribute Management Utility interface. The main window is titled "Welcome to the Type and Attribute Management Utility". The interface is divided into three main sections: "Manage Types", "Relationship Constraints", and "Manage Global Enumerations".

- Manage Types:** This section is currently active. It shows a tree view on the left with "Manage Types" selected. The main area displays the "Type - Part Usage" form, which includes fields for "Internal Name", "Display Name", "Description", "Status", "Instantiable", and "Subtypes". The "Attributes" tab is selected, showing a list of attributes with columns for "Name", "Internal Name", and "Units".
- Relationship Constraints:** This section is visible but not active. It contains a list of constraints with columns for "Name", "Internal Name", and "Units".
- Manage Global Enumerations:** This section is visible but not active. It contains a list of enumerations with columns for "Name", "Internal Name", and "Units".

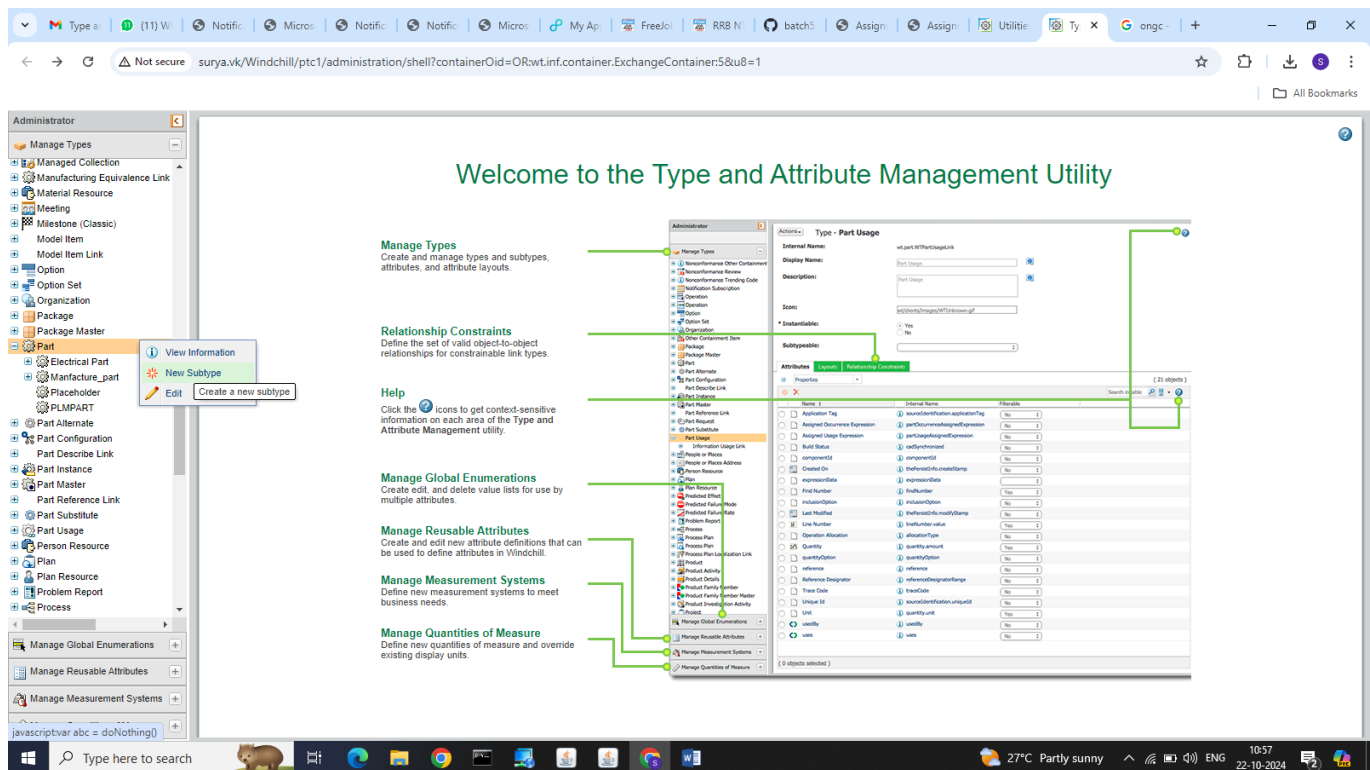
On the left side of the interface, there is a sidebar with a tree view showing the hierarchy of types and attributes. The "Manage Types" section is highlighted, and a "Create a new reusable attribute" button is visible. The "Relationship Constraints" section is also visible, and a "Create a new reusable attribute" button is visible. The "Manage Global Enumerations" section is visible, and a "Create a new reusable attribute" button is visible.

Step6: create global reusable attributes for remaining

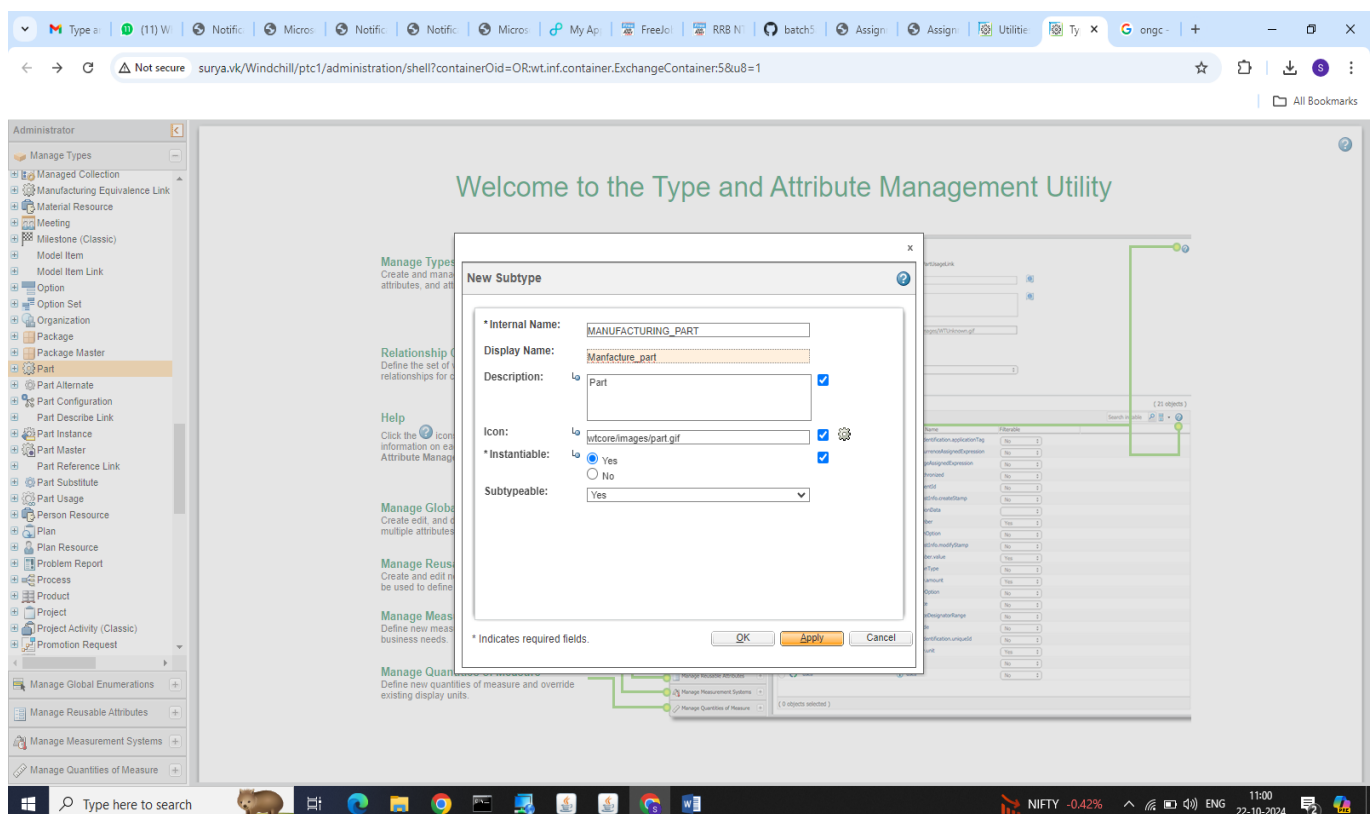
- b. isDrawing (Boolean)
- c. releaseDate (DateAndTime)
- d. height (real number)

2. Use these attributes in the wt.part.WTPart Object.

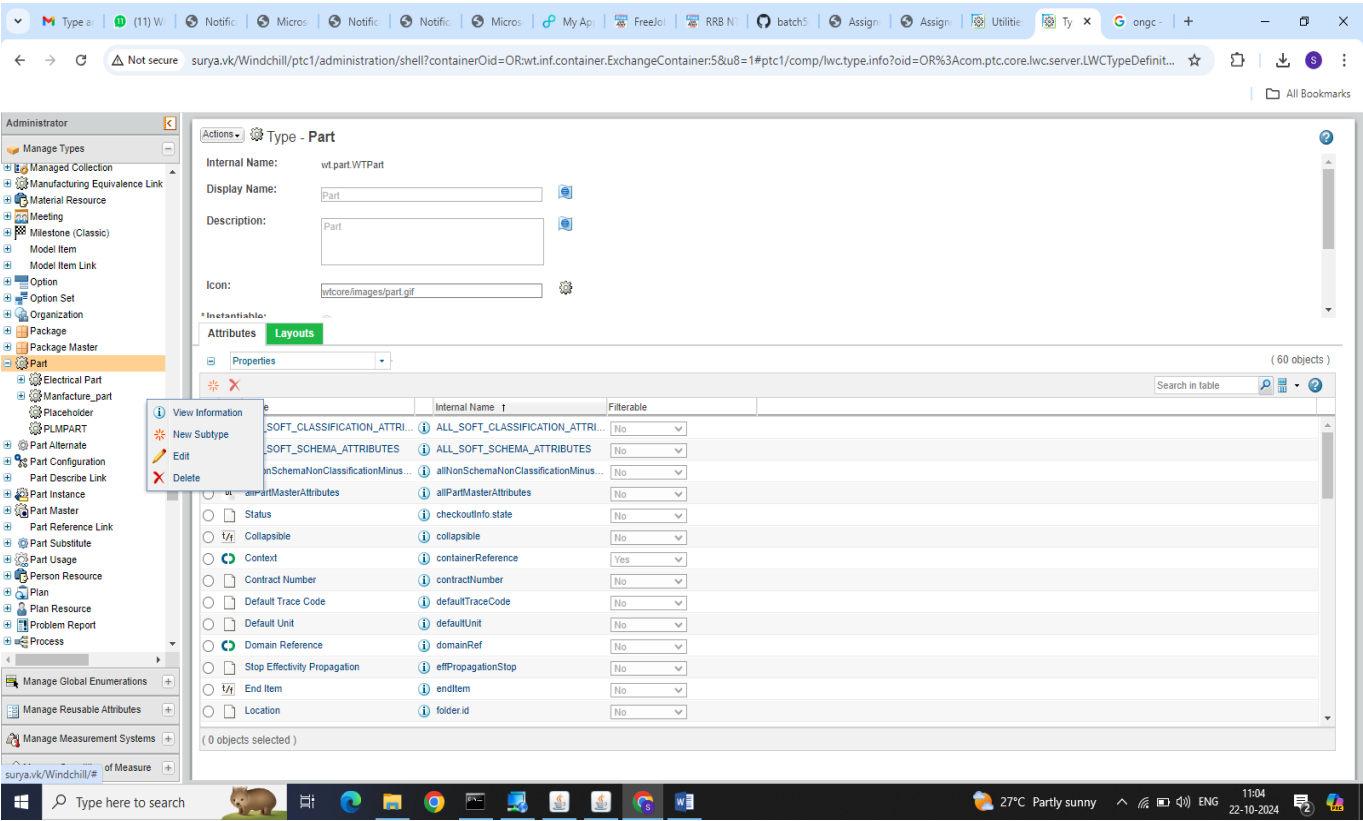
Step1: choose Manage type->part->r/c->New subtype



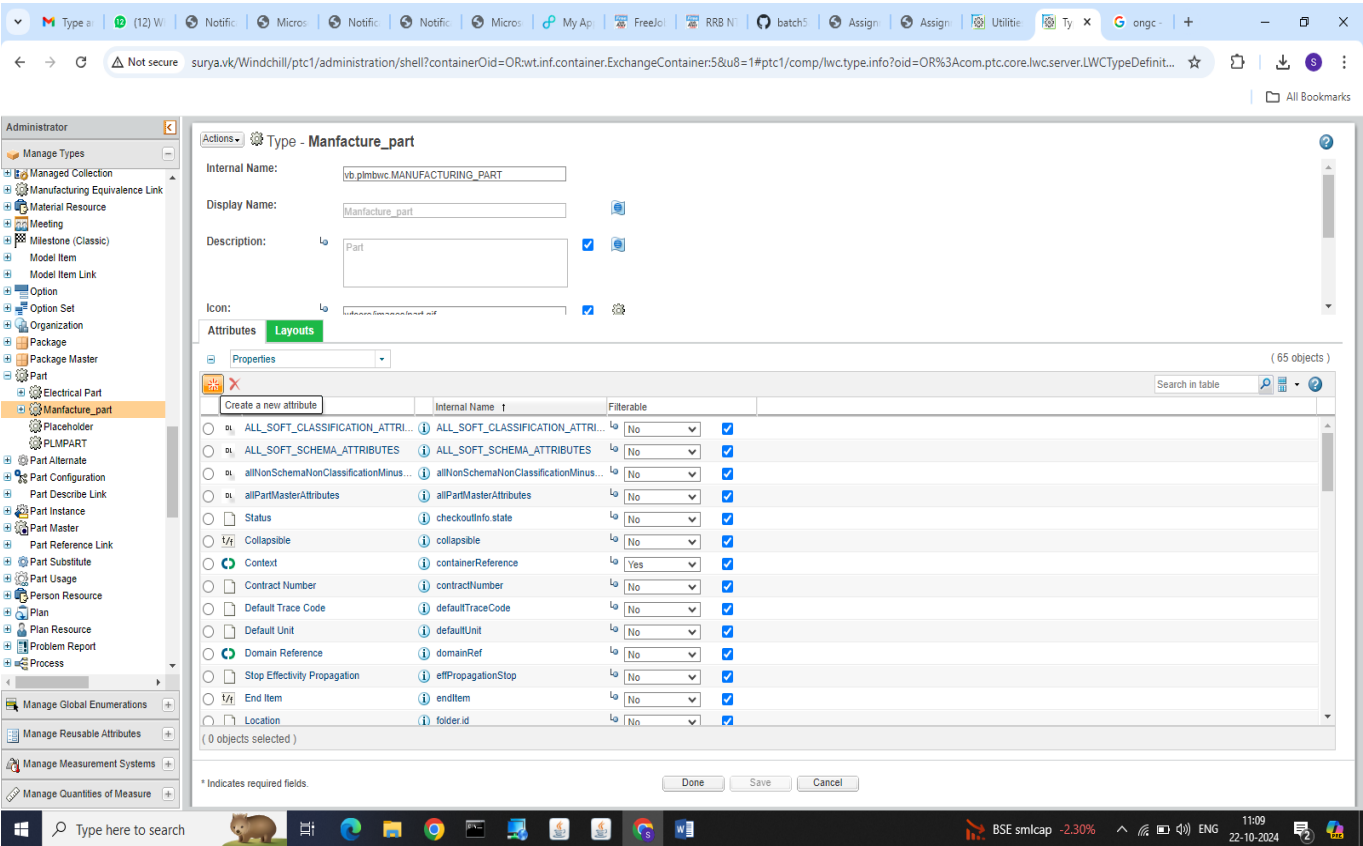
Step2: fill appropriate fields as shown in below->Apply (it creates a new subtype under WTPart).



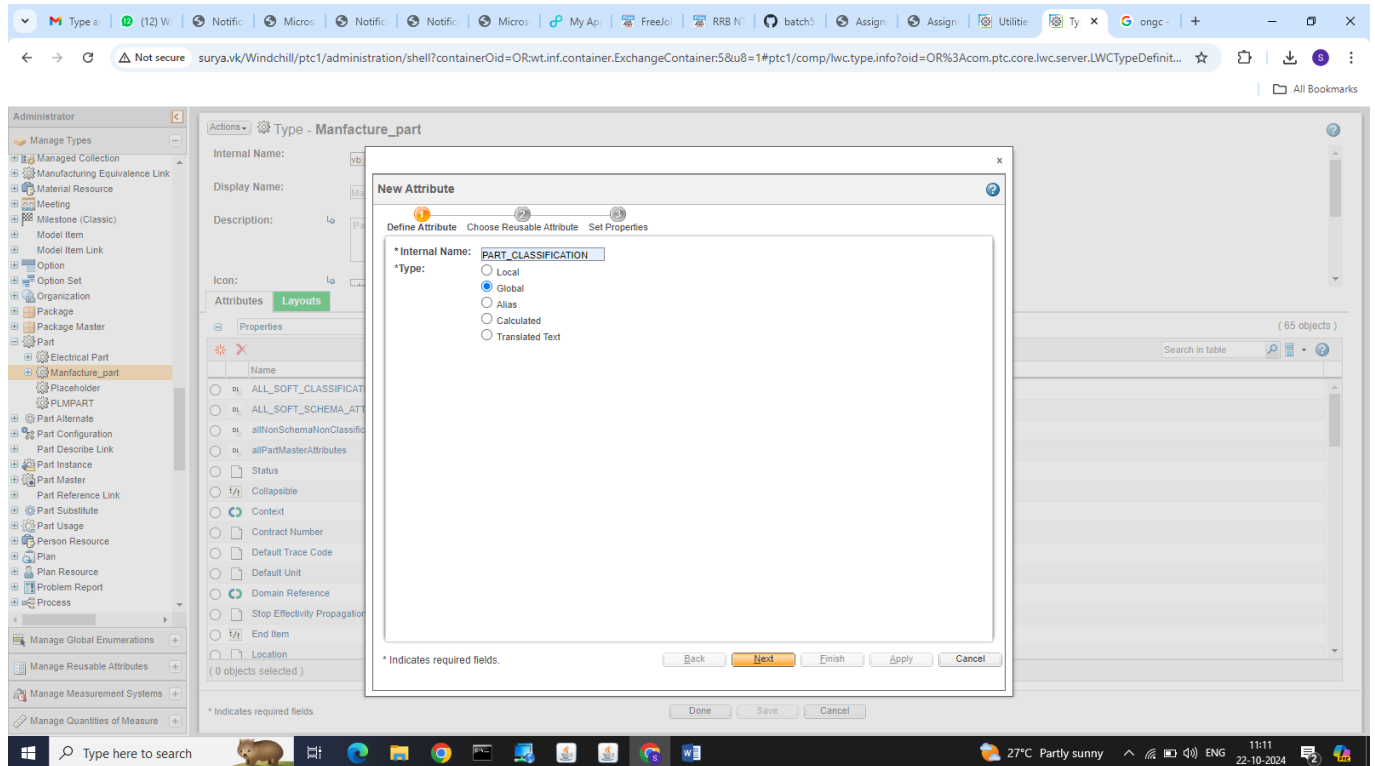
Step3: r/c on newly created subtype(datatype_attribute)->Edit



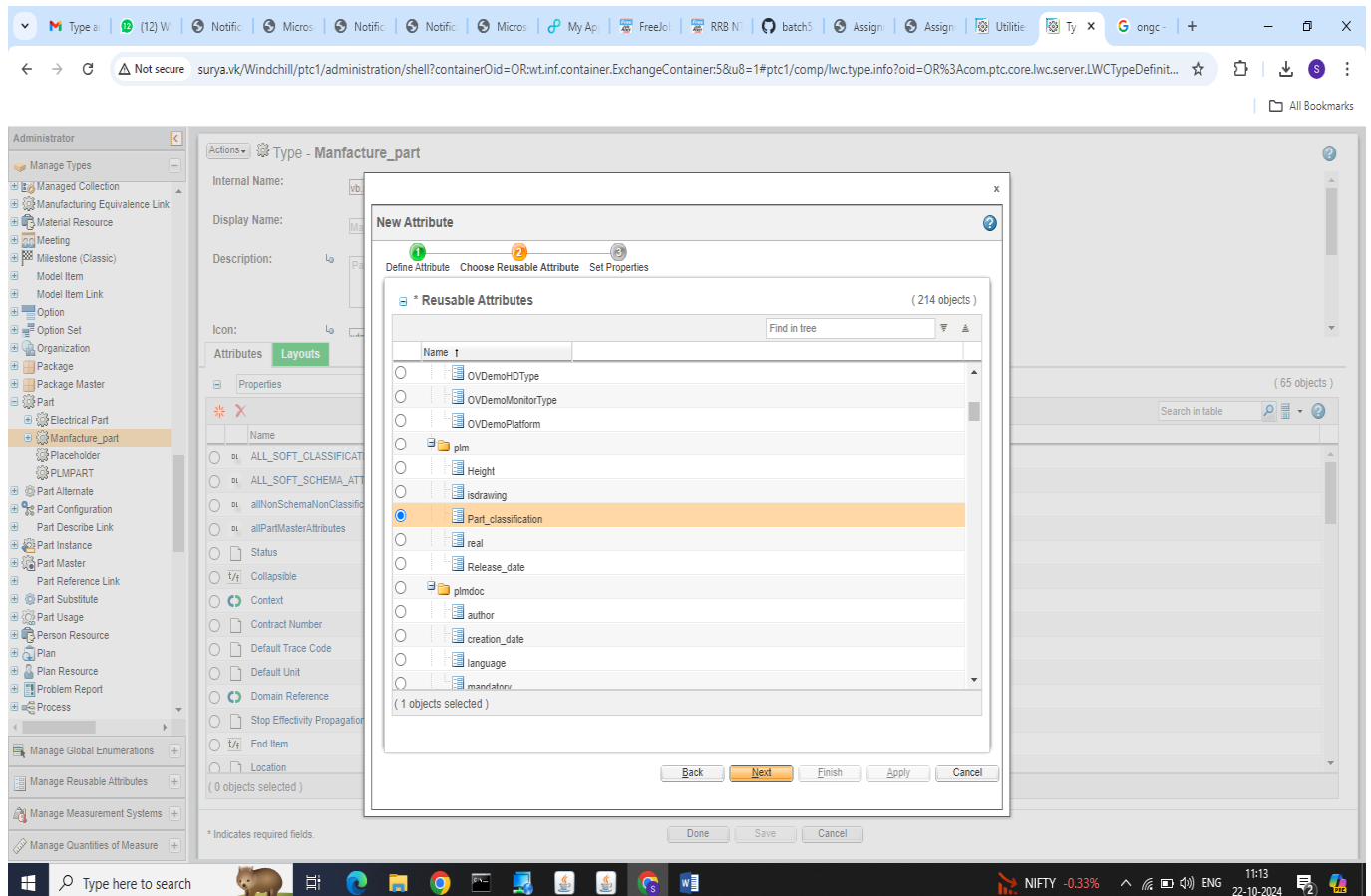
Step4: choose create new attribute as shown below.



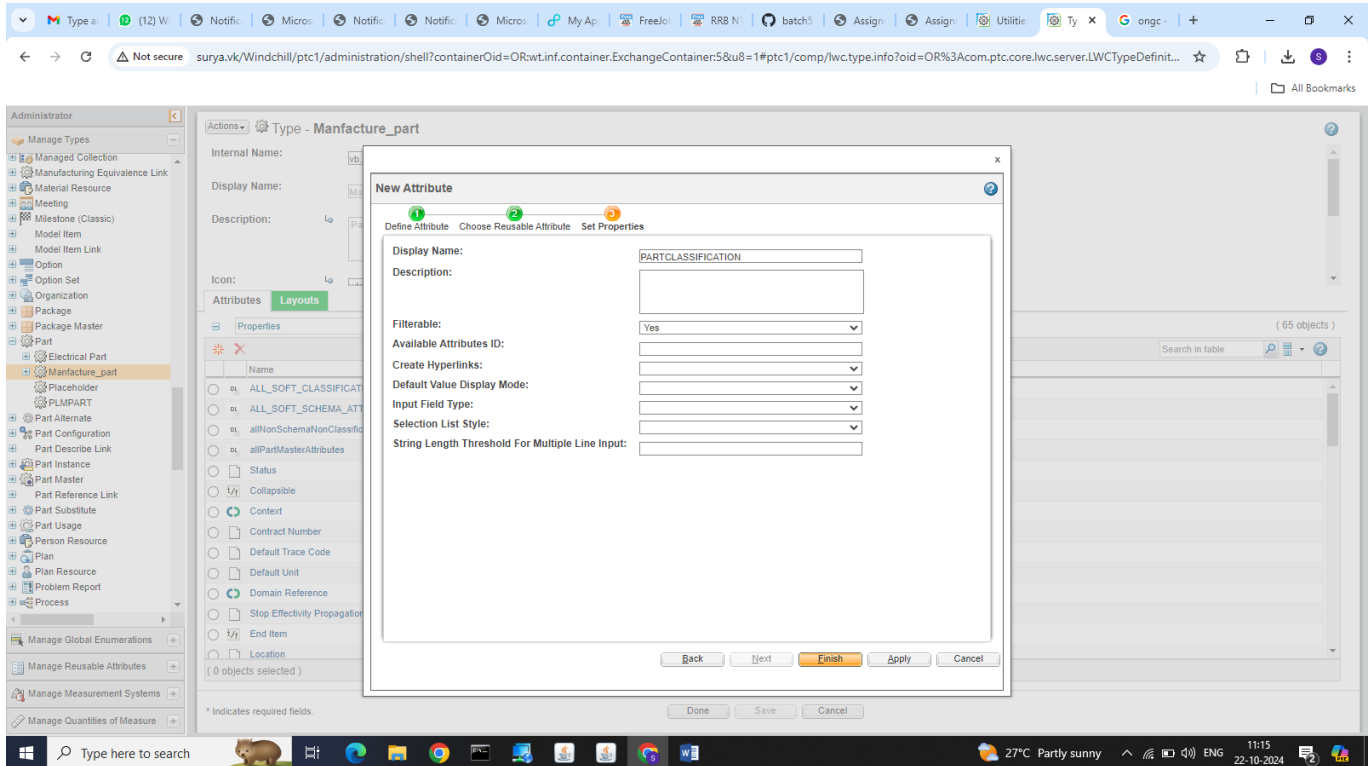
Step5: fill fields internal name: PARTCLASIFFICATION, type: Global->Next



Step6: choose appropriate folder we created in Manage Resuable Attribute->select Attribute(partClasification)->Next.



Step7: fill the relevant fields ->Finish

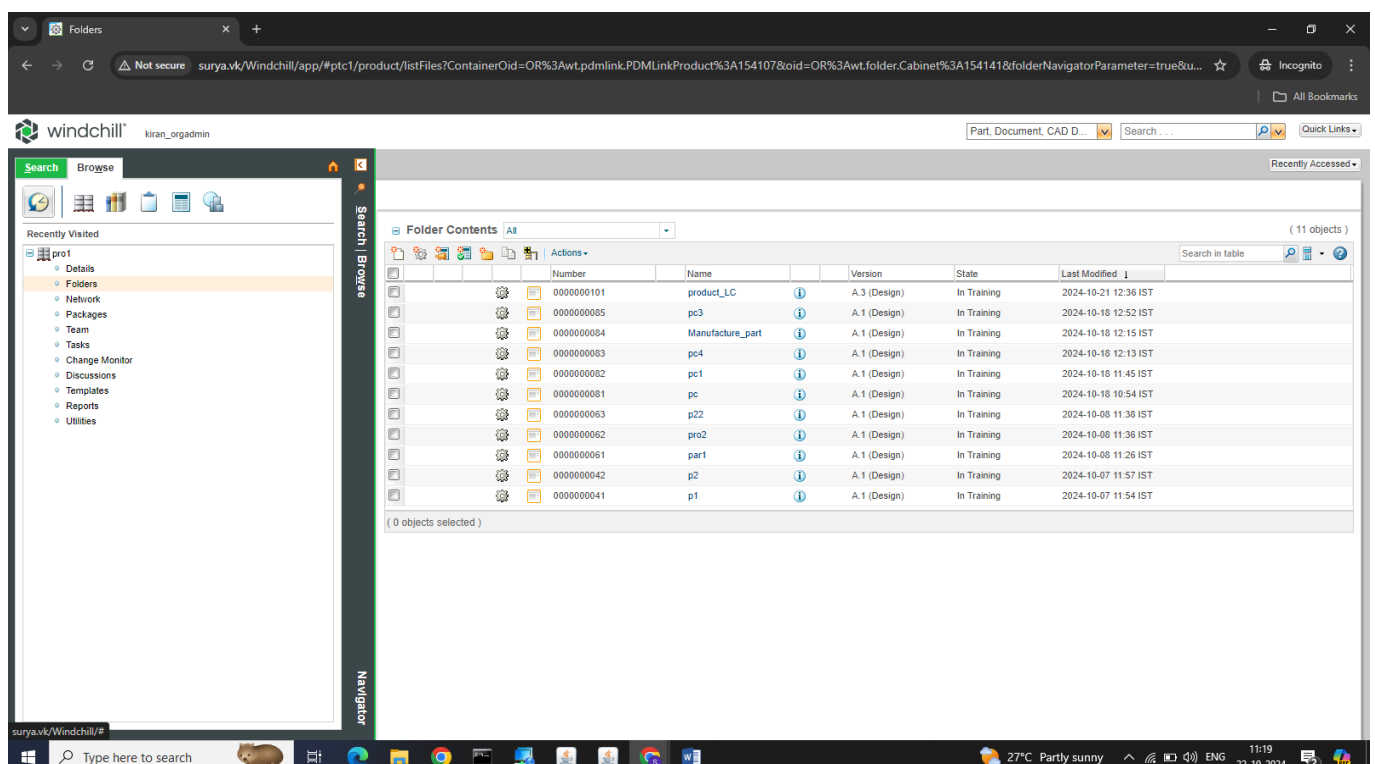


Step8: follow above step3 to step7 for the remaining attributes

- b. isDrawing (Boolean)
- c. releaseDate (DateAndTime)
- d. height (real number)

3. Create some Part objects, and populated these attributes.

Step1: go to product->folders->create new part-> choose customized subtype part(datatype_attribute).



Windchill interface showing the 'Product - pro1' folder contents. The interface includes a search bar, a list of folders, and a detailed table of folder contents.

Folder Contents Table:

Number	Name	Version	State	Last Modified
0000000101	product_LC	A.3 (Design)	In Training	2024-10-21 12:36 IST
0000000085	pc3	A.1 (Design)	In Training	2024-10-18 12:52 IST
0000000084	Manufacture_part	A.1 (Design)	In Training	2024-10-18 12:15 IST
0000000083	pc4	A.1 (Design)	In Training	2024-10-18 12:13 IST
0000000082	pc1	A.1 (Design)	In Training	2024-10-18 11:45 IST
0000000081	pc	A.1 (Design)	In Training	2024-10-18 10:54 IST
0000000063	p22	A.1 (Design)	In Training	2024-10-08 11:38 IST
0000000062	pro2	A.1 (Design)	In Training	2024-10-08 11:36 IST
0000000061	part	A.1 (Design)	In Training	2024-10-08 11:26 IST
0000000042	p2	A.1 (Design)	In Training	2024-10-07 11:57 IST
0000000041	p1	A.1 (Design)	In Training	2024-10-07 11:54 IST

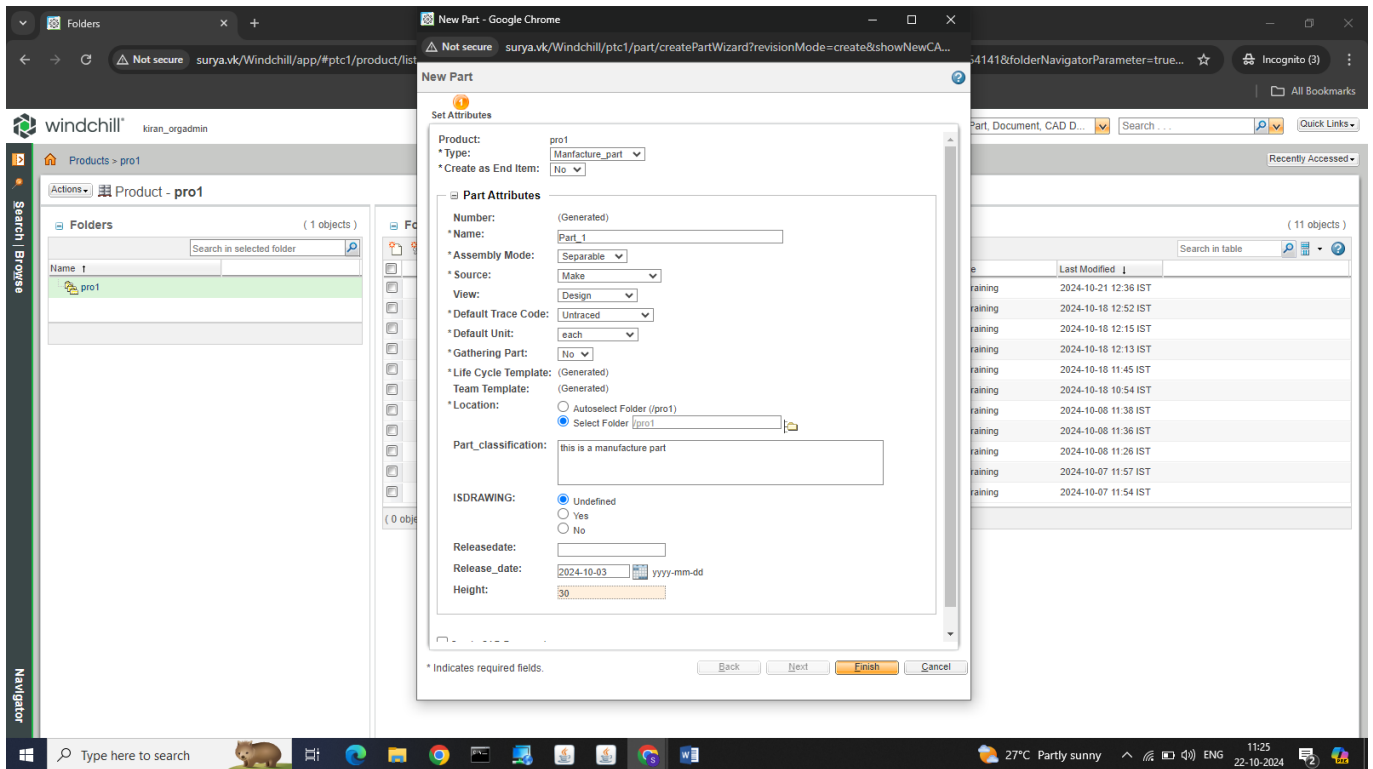
Windchill interface showing the 'New Part' dialog box. The dialog box is open, displaying the 'Set Attributes' section. The 'Product' is set to 'pro1'. The 'Type' dropdown menu is open, showing options: 'Electrical Part', 'Manufacture_part', 'Part', and 'PLMPART'. The 'Manufacture_part' option is selected.

New Part Dialog Box - Set Attributes:

- Product: pro1
- Type: **Manufacture_part**
- Options: ☐ Create C, ☐ Keep che

* Indicates required fields.

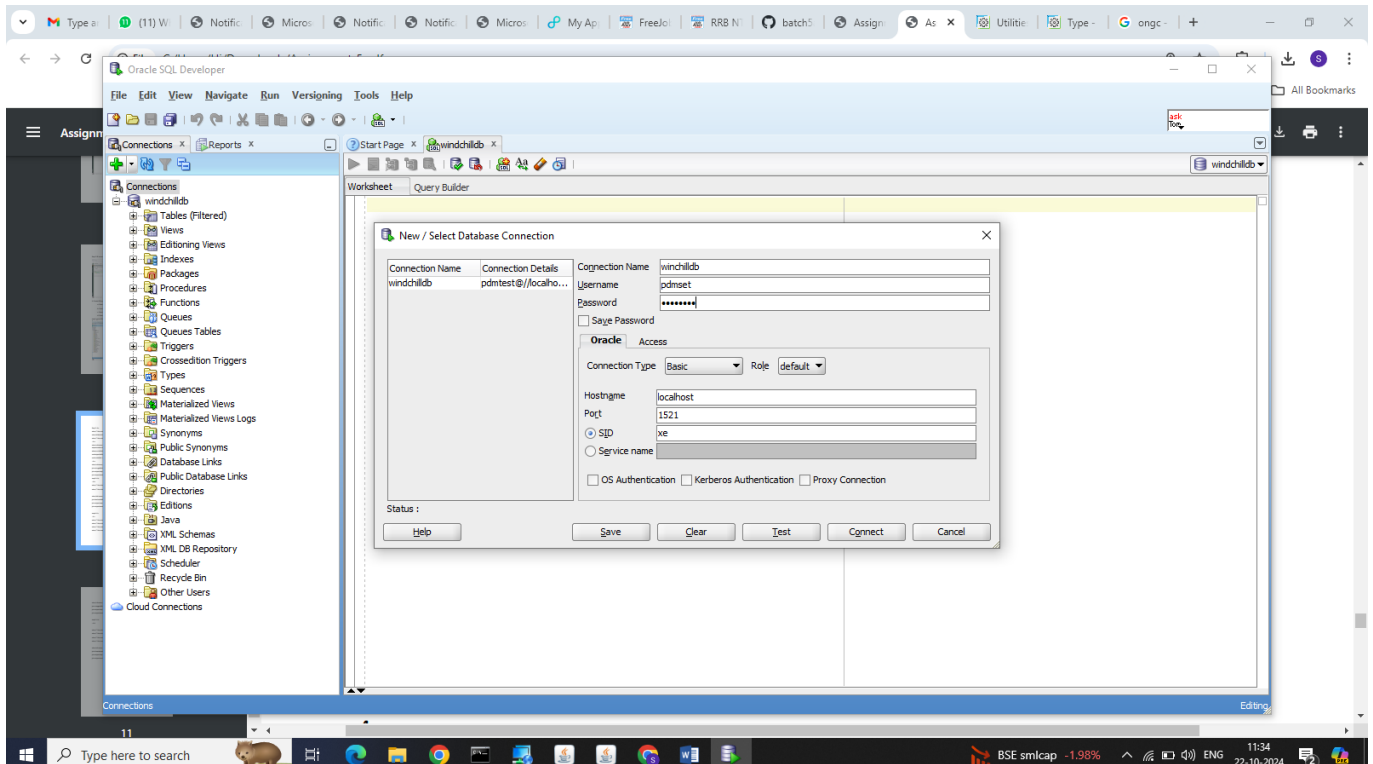
Step2: fill values in appropriate fields as shown below->Finish



4. Create SQL query for joins as well:

- From StringDefinition join StringValue join WTPartMaster join WTPart
- From booleanDefinition join booleanValue join WTPartMaster join WTPart
- From integerDefinition join integerValue join WTPartMaster join WTPart
- From timestampDefinition join timestamValue join WTPartMaster join WTPart

step1: go to SQL database ->select new-> fill as shown below



Step2: 4.a

```
select * from stringdefinition;  
select distinct displayname from stringdefinition;  
select * from stringvalue;
```

--4.a

```
select sd.name, sv.value, wtpm.name from stringvalue sv, stringdefinition sd, wtpart wtp,  
wtpartmaster wtpm  
where sv.ida3a6 = sd.ida2a2  
and wtpm.ida2a2 = wtp.ida3masterreference  
and sv.ida3a4 = wtp.ida2a2;
```

--4.a

```
select sd.name, sv.value, wtpm.name from stringvalue sv  
join stringdefinition sd on sv.ida3a6 = sd.ida2a2  
join wtpart wtp on sv.ida3a4 = wtp.ida2a2  
join wtpartmaster wtpm on wtpm.ida2a2 = wtp.ida3masterreference;
```

step3: 4.b

--4.b

```
select * from booleandefinition;  
select * from booleanvalue;  
select bd.name, bv.value, wtpm.name from booleanvalue bv  
join booleandefinition bd on bv.ida3a6 = bd.ida2a2  
join wtpart wtp on bv.ida3a4 = wtp.ida2a2 join  
wtpartmaster wtpm on wtpm.ida2a2 = wtp.ida3masterreference;
```

step4: 4.c

--4.c

```
select * from integervalue;  
select * from integerdefinition;  
select * from wtpart;  
select * from wtpartmaste
```

```
select id.name, iv.value , wtpm.name from integervalue iv
join integerdefinition id on iv.ida3a6 = id.ida2a2
join wtpart wtp on iv.ida3a4 = wtp.ida2a2
join wtpartmaster wtpm on wtpm.ida2a2 = wtp.ida3masterreference;
```

step5: 4.d

--4.d

```
select * from timestampdefinition;
select * from timestampvalue;
select * from wtpart;
select ^ from wtpartmaster;
```

```
select td.name, tv.value, wtpm.name from timestampvalue tv
join timestampdefinition td on tv.ida3a6 = td.ida2a2
join wtpart wtp on tv.ida3a4 = wtp.ida2a2
join wtpartmaster wtpm on wtpm.ida2a2 = wtp.ida3masterreference;
```