AEM Task - 6

1. Create SampleServlet (Resource Type Registration)

- This servlet extends `SlingAllMethodsServlet` and is registered using a **resourceType**.

Implementation:

```
@Component(service = Servlet.class,
           property = {

"sling.servlet.resourceTypes=myproject/components/sample",
               "sling.servlet.methods=GET"
           })
public class SampleServlet extends SlingAllMethodsServlet {

    private static final Logger LOG =
LoggerFactory.getLogger(SampleServlet.class);

    @Override
    protected void doGet(SlingHttpServletRequest request,
SlingHttpServletResponse response) throws IOException {
        response.setContentType("application/json");
        response.getWriter().write("{\"message\": \"Sample Servlet
Invoked\"}");
        LOG.info("SampleServlet invoked successfully!");
    }
}
```

How to Use:

- Assign the **resourceType** (`myproject/components/sample`) to a component.
- When an AEM page using this component is accessed, this servlet executes.

2. Create CreatePageServlet (Path Registration)

- This servlet extends `SlingSafeMethodsServlet` and is registered using a **path**.

Implementation:

```
@Component(service = Servlet.class,
           property = {
               "sling.servlet.paths=/bin/createpage",
               "sling.servlet.methods=POST"
           })
public class CreatePageServlet extends SlingSafeMethodsServlet {

    @Reference
    private ResourceResolverFactory resourceResolverFactory;

    private static final Logger LOG =
LoggerFactory.getLogger(CreatePageServlet.class);

    @Override
    protected void doPost(SlingHttpServletRequest request,
SlingHttpServletResponse response) throws IOException {
        String pageTitle = request.getParameter("pageTitle");
        String parentPath = "/content/myproject"; // Change this as
needed

        if (pageTitle == null || pageTitle.isEmpty()) {
            response.getWriter().write("Page title is required.");
            return;
        }

        try (ResourceResolver resolver =
resourceResolverFactory.getServiceResourceResolver(null)) {
            PageManager pageManager =
resolver.adaptTo(PageManager.class);
            if (pageManager != null) {
                Page newPage = pageManager.create(parentPath,
```

```
pageTitle, "/conf/myproject/settings/wcm/templates/page", pageTitle);
                resolver.commit();
                response.getWriter().write("Page created successfully
at: " + newPage.getPath());
                LOG.info("Page created successfully: {}",
newPage.getPath());
            }
        } catch (PersistenceException e) {
            LOG.error("Error creating page", e);
            response.getWriter().write("Error creating page.");
        }
    }
}
```

How to Use:

- Send a **POST request** to `/bin/createpage` with `pageTitle` as a parameter.
- A new page will be created under `/content/myproject`.

3. Use PageManager APIs for Page Creation

- **Already implemented in the `CreatePageServlet` above**, using:

```
PageManager pageManager = resolver.adaptTo(PageManager.class);
Page newPage = pageManager.create(parentPath, pageTitle, templatePath,
pageTitle);
```

4. Create a SearchServlet Using PredicateMap

- This servlet searches for pages using `PredicateGroup` (based on `fulltext` search).

Implementation:

```
@Component(service = Servlet.class,
           property = {
               "sling.servlet.paths=/bin/searchcontent",
               "sling.servlet.methods=GET"
           })
public class SearchServlet extends SlingSafeMethodsServlet {

    @Reference
    private ResourceResolverFactory resourceResolverFactory;

    private static final Logger LOG =
LoggerFactory.getLogger(SearchServlet.class);

    @Override
    protected void doGet(SlingHttpServletRequest request,
SlingHttpServletResponse response) throws IOException {
        String searchTerm = request.getParameter("query");
        if (searchTerm == null || searchTerm.isEmpty()) {
            response.getWriter().write("Query parameter is
required.");
            return;
        }

        try (ResourceResolver resolver =
resourceResolverFactory.getServiceResourceResolver(null)) {
            QueryBuilder queryBuilder =
resolver.adaptTo(QueryBuilder.class);
            Map<String, String> predicateMap = new HashMap<>();
            predicateMap.put("type", "cq:Page");
            predicateMap.put("fulltext", searchTerm);
            predicateMap.put("path", "/content/myproject"); // Define
the scope
            predicateMap.put("p.limit", "-1");

            Query query =
queryBuilder.createQuery(PredicateGroup.create(predicateMap),
resolver.adaptTo(Session.class));
```

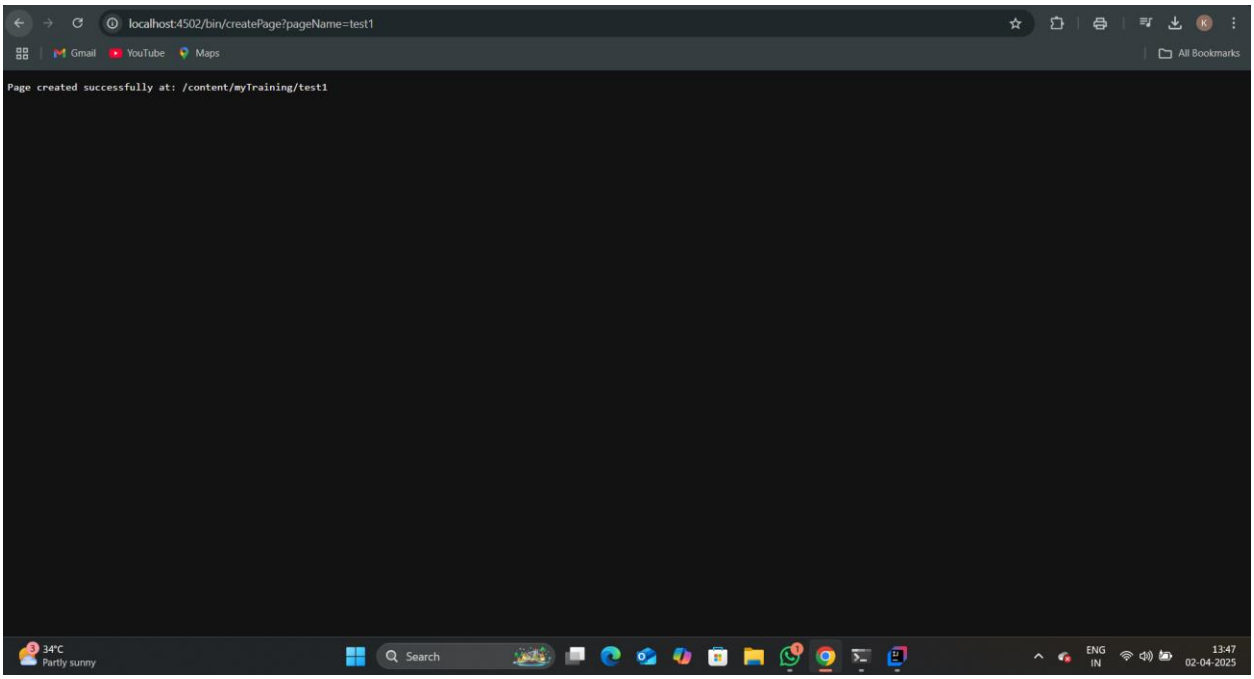
```
            SearchResult result = query.getResult();

            JSONArray jsonArray = new JSONArray();
            for (Hit hit : result.getHits()) {
                jsonArray.put(hit.getPath());
            }

            response.setContentType("application/json");
            response.getWriter().write(jsonArray.toString());
            LOG.info("Search executed for term '{}', found {}
results.", searchTerm, result.getHits().size());

        } catch (Exception e) {
            LOG.error("Error executing search", e);
            response.getWriter().write("Error executing search.");
        }
    }
}
```

How to Use:

- Send a **GET request** to `/bin/searchcontent?query=your_keyword`.
- It returns a JSON array of matching page paths.

Final Testing Steps

- **SampleServlet:** Access a page with `myproject/components/sample` and check the response.
- **CreatePageServlet:** Send a **POST request** with `pageTitle` and check if the page is created.
- **SearchServlet:** Send a **GET request** with `query=your_keyword` and check the results.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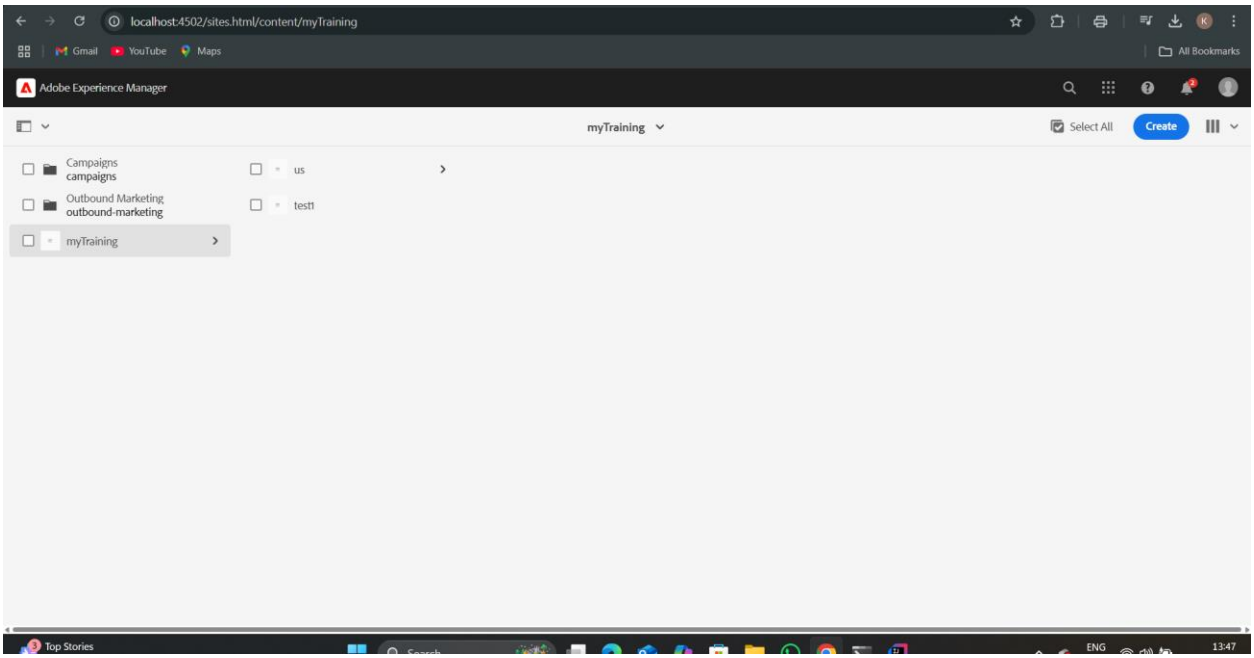
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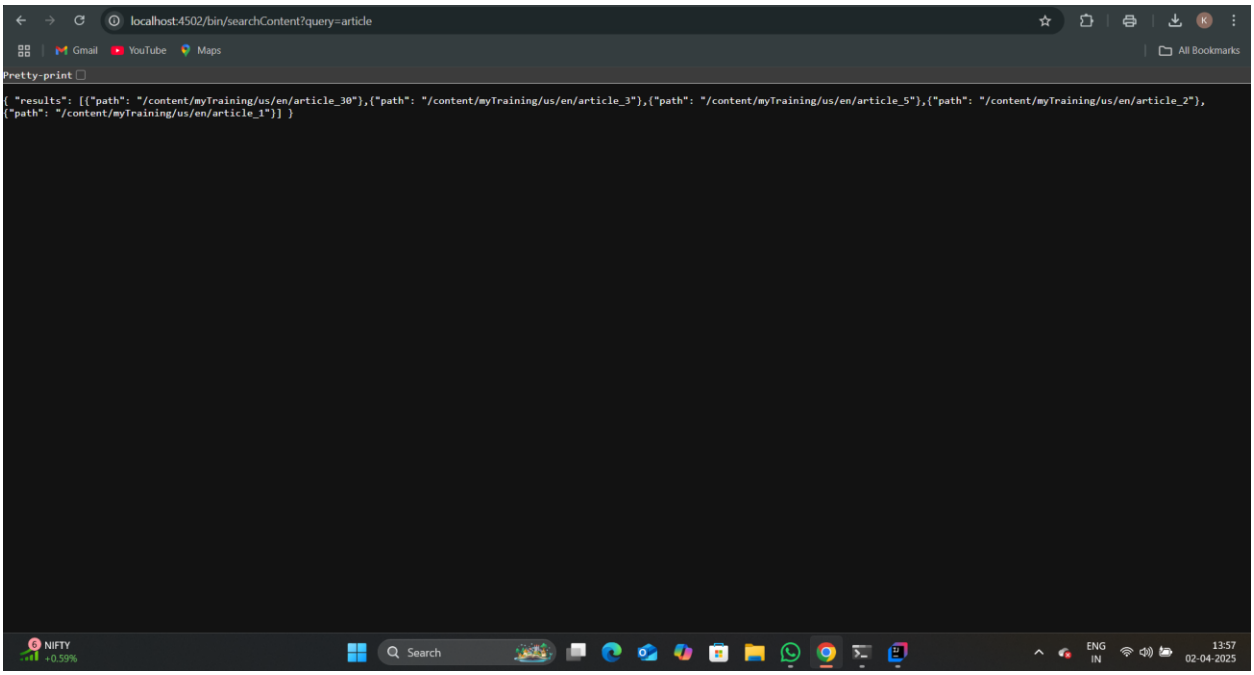
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