Task-13 CODE

QUESTION

1. Create a scheduler. When I provide any cron expression for 3 minutes, after 3 minutes, whatever page has the `Expirydate` property with the current date and time should be published, and those with previous dates and times should be unpublished.

Answer:

BY USING SCHEDULER PUBLISHING AND UNPUBLISHING THE PAGE

```
package com.adobe.aem.guides.demo.core.schedulers;

import org.osgi.service.metatype.annotations.AttributeDefinition;
import org.osgi.service.metatype.annotations.AttributeType;
import org.osgi.service.metatype.annotations.ObjectClassDefinition;

@ObjectClassDefinition(name = "PreviousDatePublish",description = "scheduler is created for publish")
public @interface PresentDatePublish {

	@AttributeDefinition(
			name="service name",
			type = AttributeType.STRING,
			description = "enter the service name"
			)
	public String getservice_name() default "practise";
	@AttributeDefinition
	(
			name="can run concurrently",
			type=AttributeType.BOOLEAN,
			description="can run concurrently"
			)
```

```
        public boolean canrunconcurrently() default false;


        @AttributeDefinition
        (
                        name="Enabled scheduler",
                        type=AttributeType.BOOLEAN,
                        description="Enable the scheduler"
                        )
        public boolean Enabledscheduler() default true;

        @AttributeDefinition(
                        name="Expression",
                        type = AttributeType.STRING,
                        description = "enter the Expression"

                        )
        public String getExpressi();
}
```

SECONDSCHEDULER

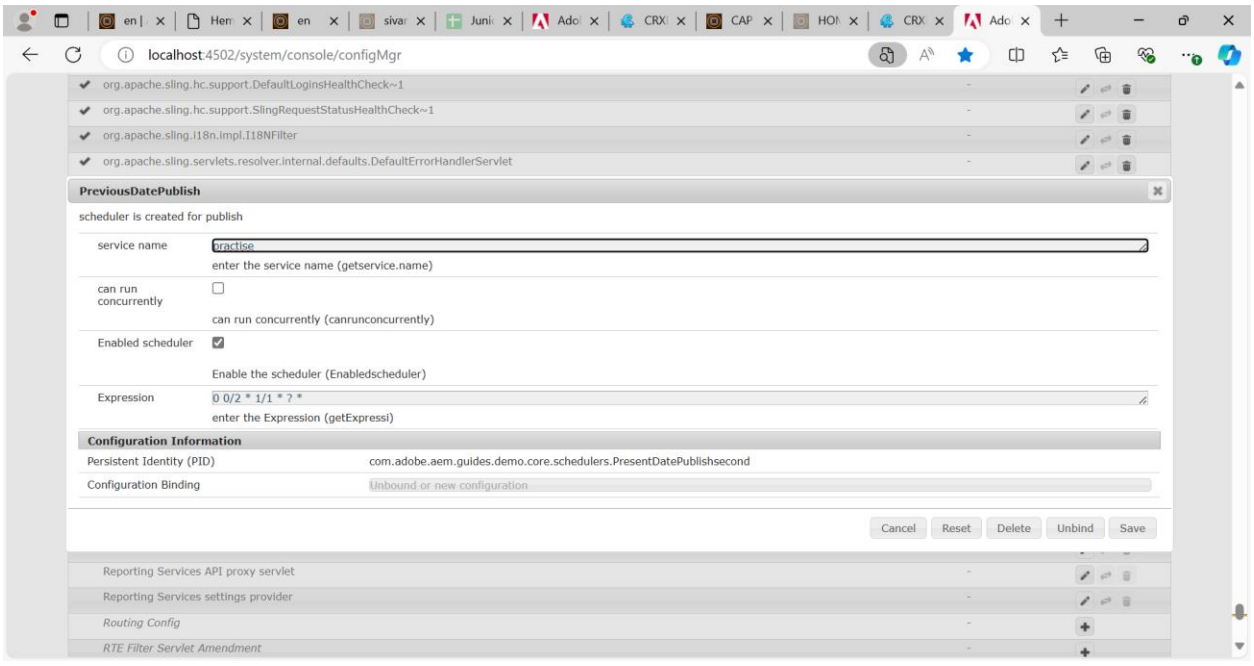
```
package com.adobe.aem.guides.demo.core.schedulers;

import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.HashMap;
import java.util.Map;

import javax.jcr.Node;
import javax.jcr.RepositoryException;
import javax.jcr.Session;
import javax.jcr.query.Query;
import javax.jcr.query.QueryManager;
import javax.jcr.query.QueryResult;

import org.apache.sling.api.resource.LoginException;
import org.apache.sling.api.resource.ResourceResolver;
import org.apache.sling.api.resource.ResourceResolverFactory;
import org.apache.sling.commons.scheduler.ScheduleOptions;
import org.apache.sling.commons.scheduler.Scheduler;
import org.osgi.service.component.annotations.Activate;
import org.osgi.service.component.annotations.Component;
import org.osgi.service.component.annotations.Deactivate;
import org.osgi.service.component.annotations.Modified;
import org.osgi.service.component.annotations.Reference;
import org.osgi.service.metatype.annotations.Designate;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;

import com.day.cq.replication.ReplicationActionType;
import com.day.cq.replication.ReplicationException;
import com.day.cq.replication.Replicator;
import com.day.cq.wcm.api.Page;
import com.day.cq.wcm.api.PageManager;
```

```
@Designate(ocd = PresentDatePublish.class)
@Component(service = Runnable.class, immediate = true)
public class PresentDatePublishsecond implements Runnable {
   private static final Logger log =
LoggerFactory.getLogger(PresentDatePublishsecond.class);

   @Reference
   private Scheduler scheduler;

   @Reference
   private ResourceResolverFactory resourceResolverFactory;

   @Reference
   private Replicator replicator;

   private static final String SERVICE_USER = "hemanth";

   private String cronExpression;

   @Modified
   public void modify(PresentDatePublish sch) {
      this.cronExpression = sch.getExpressi();
      addscheduler(sch); // Re-schedule with the new cron expression
   }

   @Activate
   public void activation(PresentDatePublish sch) {
      this.cronExpression = sch.getExpressi();
      addscheduler(sch);
   }

   public void addscheduler(PresentDatePublish sch) {
      log.info("Scheduler is created");
      if (sch.Enabledscheduler()) {
         ScheduleOptions scheduleOptions = scheduler.EXPR(cronExpression);
         scheduleOptions.canRunConcurrently(sch.canrunconcurrently());
         scheduleOptions.name(sch.getservice_name());
```

```
        scheduler.schedule(this, scheduleOptions);
    }
}

@Deactivate
public void deactivate(PresentDatePublish sch) {
    removescheduler(sch);
}

public void removescheduler(PresentDatePublish sch) {
    log.info("Job is unscheduled");
    scheduler.unschedule(sch.getservice_name());
}

@Override
public void run() {
    log.info("Scheduler is running in present date");
    log.info("My cron expression in present date: " + cronExpression);

    ResourceResolver resourceResolver = null;
    try {
        resourceResolver = getServiceResourceResolver();
        if (resourceResolver != null) {
            handlePageReplication(resourceResolver);
        }
    } catch (LoginException e) {
        log.error("Failed to get service resource resolver", e);
    } catch (ReplicationException e) {
        log.error("ReplicationException occurred", e);
    } finally {
        if (resourceResolver != null) {
            resourceResolver.close();
        }
    }
}
```

```
    private ResourceResolver getServiceResourceResolver() throws LoginException
{
        Map<String, Object> param = new HashMap<>();
        param.put(ResourceResolverFactory.SUBSERVICE, SERVICE_USER);
        return resourceResolverFactory.getServiceResourceResolver(param);
    }

    private void handlePageReplication(ResourceResolver resourceResolver)
throws ReplicationException {
        try {
            Session session = resourceResolver.adaptTo(Session.class);
            if (session == null) {
                log.error("Could not obtain a JCR session.");
                return;
            }

            String queryString = "SELECT * FROM [cq:PageContent] AS content WHERE
ISDESCENDANTNODE(content, '/content/Demo/us/en') AND content.[expirydate]
IS NOT NULL";
            QueryManager queryManager =
session.getWorkspace().getQueryManager();
            Query query = queryManager.createQuery(queryString, Query.JCR_SQL2);
            QueryResult result = query.execute();

            javax.jcr.NodeIterator nodes = result.getNodes();
            SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-
dd'T'HH:mm:ss.SSSXXX");
            String currentDateStr = sdf.format(new Date());

            while (nodes.hasNext()) {
                Node node = nodes.nextNode();
                if (node.hasProperty("expirydate")) {
                    String expiryDate = node.getProperty("expirydate").getString();
                    PageManager pageManager =
resourceResolver.adaptTo(PageManager.class);
                    Page page = pageManager.getContainingPage(node.getPath());
```

```
            if (page != null) {
                if (expiryDate.startsWith(currentDateStr.substring(0, 10))) {
                    // Publish the page
                    replicator.replicate(session, ReplicationActionType.ACTIVATE,
page.getPath());
                    log.info("Published page: " + page.getPath());
                } else if (expiryDate.compareTo(currentDateStr) < 0) {
                    // Unpublish the page
                    replicator.replicate(session, ReplicationActionType.DEACTIVATE,
page.getPath());
                    log.info("Unpublished page: " + page.getPath());
                }
            }
        }
    } catch (RepositoryException e) {
        log.error("Error while querying and replicating pages", e);
    }
  }
}
```



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wknd3.log | new 17 | new 18 | new 19 | new 20 | June.log | error.log | workflow.log | new 21

```
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Scheduler is running in present date
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond My cron expression in present date: 0 0/2 * 1/1 * ? *
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Unpublished page: /content/Demo/us/en/article3/lohitanna
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Published page: /content/Demo/us/en/workflowpage/hemu
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ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Unpublished page: /content/Demo/us/en/article3/lohitanna
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Published page: /content/Demo/us/en/workflowpage/hemu
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Published page: /content/Demo/us/en/workflowpage/shiva
ractise] com.adobe.aem.guides.demo.core.schedulers.PresentDatePublishsecond Published page: /content/Demo/us/en/hemujulylauncher/shiva
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```