TRANSACTION FINALIZERS FOR SALESFORCE QUEUEABLE JOB

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Salesforce Queueable Job is very important for long running data updates. We must notify when particular data update is finished. This feature was not available till winter 2020 release.

Salesforce has introduced transaction finalizer in Spring 2020 release. This will help us adding any post completion logic for Queueable Job.

Finalizers

Finalizer is **interface** which need to be implemented in a class to add post action. It's execute method takes **FinalizerContext** as parameter which will give current executing job detail. So, we can attach the same Finalizer to multiple Queueable jobs and utilize a consistent, common codebase for post-async actions. Like in case of error send email to IT Ops team etc.

```
public class EmailHelper {
    public boolean sendErrorNotification(string jobId)
    {
        Messaging.SingleEmailMessage message = new Messaging.SingleEmailMessage();
        message.toAddresses = new String[] { 'itops@salesforcecodex.com' };
        message.subject = 'Error in Job :' +jobId ;
        message.htmlbody  = 'Hello Admin, </br>There is error in job.</br> Please check</br></br>. Apex Job';
        Messaging.SingleEmailMessage[] messages =   new List<Messaging.SingleEmailMessage> {message};
            Messaging.SendEmailResult[] results = Messaging.sendEmail(messages);

        if (results[0].success) {
            return true;
        } else {
           return false;
        }
    }
}
```

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```
public class SendEmailFinalizer implements Finalizer {
  public void execute(FinalizerContext context){
    Id parentQueueableJobId = context.getAsyncApexJobId();
    switch on context.getAsyncApexJobResult() {
      when SUCCESS {
        System.debug('Job ID: ' + parentQueueableJobId + ' Succeeded');
      }
      when UNHANDLED_EXCEPTION {
        //Send notification to IT Ops Team
        EmailHelper.sendErrorNotification(parentQueueableJobId);
        System.Debug('OH NOES! (Job ID: ' + parentQueueableJobId +'):FAILED! with error: ' +  context.getAsyncApexJobException().getMessage());
      }
    }
  }
}
```

SendEmailFinalizer.apxc hosted with ♡ by GitHub view raw

We can attached finalizer using **System.attachFinalizer.**

```
System.attachFinalizer(emailFinalizer);
```

SendEmailFinalizer can be used for all queueable jobs in org. Let us see how to use above Finalizer class in queueable job.

```
public class UpdateCaseQueuable implements Queueable {
    public List<Case> caseList ;
    public UpdateCaseQueuable(List<Case> cases){
        this.caseList = cases ;
    }

    public void execute(QueueableContext context) {
        for(Case a :caseList){
            a.Description ='Updated from UpdateCaseQueuable';
            a.Status='Closed';
         }
        update caseList;

        //Finalizer class
        SendEmailFinalizer emailFinalizer = new SendEmailFinalizer();
        System.attachFinalizer(emailFinalizer);
    }
}
```

UpdateCaseQueuable.apxc hosted with ♡ by GitHub view raw

Summary:

Finalizers is new feature which will help in adding post completion logic for queueable jobs.