

## **HCL Technologies Industrial Training**

*BPM Training Examination Group Team Exam– Due Date 18 January 2018*

### **IBM BPM Group Work -BPM 8002**

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*Reading Time: 7 days*

*Writing Time: 96 Hours*

*Permitted Materials: Notes and any other material*

*Answer **all** questions in this section using the answer booklet(s) provided. Answers are expected to be succinct but complete. Answers that are too long and irrelevant will be penalized. Please do the technical work in IBM BPM Cloud and also take screenshots in a word document. Groups of 2 only, will be done and submission will come in as one's group for this. **Plagiarism is not allowed and will be picked up***

**Question 1** Please define the following methods of a REST Service namely and give example of a BPM API on REST that achieves the following below. eg the getTaskDetails on TASK API uses the a GET operations

1. GET
2. POST
3. PUT

**Question 2a** Please give a brief understanding of Ad-hoc Process?[ 5 marks]  
Differentiate an adhoc process and a straight through process giving advantages and disadvantages of each?Give your own examples[ 5 marks]

**Question 2b** Explain the uses of a Saved Search?[ 5 marks]

**Question 2c** Which BPM database does a Saved Search get its data from?[ 5 marks]

This image shows a single sheet of white paper with ten evenly spaced horizontal dotted lines, typical of primary school handwriting practice paper. The lines are black and extend across the full width of the page. There is no text or other markings on the paper.

#### Question 4

1. [ 5 marks ] BPM runs the BPM engine on a basic java Engine please explain the matching java engines for these BPM products ?
  - (a) IBM BPM -> .....
  - (b) Oracle Fusion -> .....
  - (c) Pega —> .....
2. [ 5 marks ] Pega can run on different platforms, explain why that is an advantage/disadvantage over IBM BPM?

**Question 5a** Please show how to use SoapUI to call the OpenWeatherService API get Weather of a specified town in the world. Show screenshots in a word document for the request and response. Please generate a token and use it in this case. [ 10 marks]

**Question 5b** What is the role of a Websphere Administrator in IBM BPM? [ 5 marks]

What is the role of a IBM BPM Administrator in IBM BPM? Which tools does one use [ 5 marks]

**Question 5d** BPM REST response codes include the following HTTP codes 401, 404, 403, 500 and 200 for successful responses. Please run tests to demonstrate cases where you can get any 3 of the above using any of following APIs on REST. Please show screenshots.

1. [ 5 marks ] Process API –startProcess
2. [ 5 marks ] Task API –getTaskDetails
3. [ 5 marks ] Task API –finishTask



**Question 6** Please define a 2 step process in IBM BPM Cloud and inside the Exam Process Application and show the model here. Call the process CarLoanApplicationProcess-YourName. The process should show a car loan application and the first step should be called "Capture Car Application" and the second "Approve Car Loan". Please create a process BO and call it CarLoanApplicationProcessBO with variables following the following outlined sub Business Objects.

1. [ 5 marks ] customerDetailsBO with name,surname,dob,addressBO, emailAddress,phoneNumber, nextOfKin,suretyPersonName,town
2. [ 5 marks ] carLoanApplicationDetails with loanDate,loanApprovalDate,loanAmount, carDetailsBO, carLoanStatus,interestRate,repaymentAmount ,approver,capturerConsultantName
3. [ 5 marks ] customerFinancialDetailsBO—customerSalary, customerEmployer, customerNetSalary,customerExpenses,customerCreditScore.

**Question 7** Based on the process in 6 above please do the following [ [20 marks ]

1. [ 5 marks ] Generate Human Services applicable per step and call the first one captureLoanHS and the second one approveCarLoanHS
2. [ 5 marks ] Please make town,status fields as drop downs taking the following values respectively for Town Pretoria,Durban,Cape Town, Tzaneen,Messina,NewCastle
3. [ 5 marks ] Please make status take values, "Pending", "Approved", "Rejected", "Cancelled" in a drop down.
4. [ 5 marks ] ApplicationDate should not be on the coach but should be autocalculated when the process starts.
5. [ 5 marks ] The approverCarLoanHS should have a header of customerDetails and thee application Details and Financial Details should be in a tab.
6. [ 5 marks ] The approver should only change the status only to approved or rejected. If rejected is selected , the approver should see a field called comments to put reason for rejection. IF approval is approved , the field should not show.

**Question 8    Validations** These will be based on the process in Question 6 above.

1. [ 5 marks ] On the approveCarLoanHS please make comments mandatory only when approval status is rejected
2. [ 5 marks ] On the captureCarLoanHS please make all personal details, financial details mandatory and show a message if this is not submitted this is mandatory.

**Question 9** Adhoc Process

ABC Rugby Team wanted to do a arrange an end of year party to celebrate winning Rugby league. So they looking for a BPM process that will allow him to do the following ,

1. Book a venue for the party. This is done by Rugby Party Committe.
2. Make a payment of the venue. This is done by Rugby Finance Commitee
3. Hire a Venue Decorator for the party only when the venue has been booked successfully. This is done by the Rugby party committe.
4. A chef make food arrangements for the party only when the number of delegates has been confirm. This is done by the Rugby Food Commitee.
5. Transport Secretary does transport arrangements to venue when venue has been booked. This is done by the Rugby Party Commitee.
6. Rugby Party Commitee invites and confirms delegates. When venue has been booked.
7. Party will kick off if all the above are done except payment which can be paid before or after the party and takes 5 hours.
8. Cleanup of the venue will be done by KC Cleaners after the party.

**Please create the following**

1. [ 10 marks] Please define and AdHoc process with AdHoc Tasks with preconditions for the above and the following steps, Book Venue,Pay Venue,Decorate Venue,Prepare Food,Make Transport Arrangements. Please create a snapshot.
2. [ 10 marks] Please run a test of the above by triggering from REST API Start Process API
3. [ 10 marks] Please Trigger 10 processes
4. [ 10 marks] Please create a Saved Search in Portal and Search it on REST API, Task API, Task Query Entity List. Dont forget to put size and offset to maximum 10. Please put the following on the Saved Search namely , name, surname,applicationdate,approvalDate,
5. [ 10 marks] Please create a Team for the above teams namely Rugby Party Committee,Rugby Food Comittee, Rugby Finance Comittee and assign to the tasks defined.

### Question 10 UCAs—

**BuyTVUCAProcess** A TV Sales Company Game has IBM BPM and implemented a BPM process includes the capture TV Human Step where a receiptNumber is generated and given to a Customer, then has to wait for a payment to be done in the bank branch using a java frontend system called GameCustomerPayee Online. A payment is implemented by one capturing a receipt Number and the amount paid , branch of Game where the payment was done as well as the cashier who made the made the payment. The cash system will call a BPM Service Flow called payTVServiceFlow, and this accepts the following as input , namely the the receiptNumber,amountPaid,branchStore,cashierName. This will be in a business object called BuyTVUCAProcessBO. Once the payment is done and this correlates to the buyTVprocess using a message event. The process will be able to continue to go to the "DeliverTV" human step and the process ends. The process BO will include the following fields , tvType, tvModel, nameOfBranch, sellingAgent,dateOfPurchase,priceOfTV,customerName,customerAddress,typeOfDelivery,costOfDelivery and receiptNumber of course.

1. [ 10 marks] Please implement the Process which has the 2 steps and the intermediate event-message receiving event in the middle where the receiptNumber is defined as the correlation key. Validations should be applied for all fields and for the email a REGEX for email validation should be applied.
2. [ 10 marks] Please create a ServiceFlow that gets the payment when its done and in the Service Flow implement a message Sending Event that will correlate with the above process. The receiptNumber will be the correlation Key as well. But also the BuyTVUCAProcessBO will also need to be send as part of the message event to the process.
3. [ 10 marks] Please trigger 4 processes and show screenshots and get different receipt numbers. Then do the payment using the payTVServiceFlow and show screenshots that the right process that matches the receipt number was picked up and the process continued. Please export the Twx snapshot of the process and submit as well.

### Question 11 UCAs—

**HomeLoanProcessWithCreditProcessCheckUsingUCA** ABC Bank has IBM BPM and implemented a BPM process called HomeLoanProcessWithCreditProcessCheckUsingUCA includes the capture Home Loan Human Step where there is a capture Home Loan Step followed by a Fraud Check Human Step and a Credit Check intermediate event(Sending) and then followed by a Credit Check intermediate Event(Recieving). The credit check will take the form of a sending message event which triggers a Credit Process which is another BPM process. the Credit process is triggered with a the Credit Check Sending intermediate Event and the correlation key is the process Id of the Home Loan Process. The credit process is started with a message event , and has one step called "Credit Check" which when done there is a Credit Check Sending Intermediate Event that sends a message event to the original process with the correlation key being the Home Loan process ID which it received originally.

1. [ 10 marks] Please implement the Home Loan Process which has the 2 steps and the intermediate event-message recieving event in the middle where the process ID is defined as the correlation key. The process BO is called HomeLoanProcessBO and has the same data structure as the Home Loan Process done in class. Only add one more field which is called creditCheckStatus which a string field. Validations should be applied for all fields and for the email a REGEX for email validation should be applied.
2. [ 10 marks] Please implement the Credit Process which has the 1 steps and the intermediate event-message sending event following the human step and will send the credit decision as well where the process ID is defined as the correlation key. The credit Process BO will have the following fields, name, surname,creditCheckStatus which is can take either creditApproved or creditApproved as the values. These needs to be implemented using an ENV and single Select.
3. [ 10 marks] Please trigger 4 processes and show screenshots showing a Home Loan process being triggered which then triggers a Credit PProcess with an event and when the Credit Process is done will then send a message to the original process with a decision and continues.Please export the Twx snapshot of the process and submit as well.

**Question 12    ServiceFlow to consume getWeatherAPI service—  
getWeatherAPIServiceFlow**

1. [ 10 marks] Please create a YAML for the OpenWeatherService API REST Service. The YAML will be provided for those who just want to the second question.
2. [ 10 marks] Please create a ServiceFlow that consumes the service above in BPM and run some test to get the data. Please test the ServiceFlow using the REST API-Service API , startService. Remember to generate the input data JSON that matches the input BO for the Service Flow.
3. [ 10 marks] Please test the serviceFlow from REST API and capture screenshots

**Question 13 ..**  
**BPM and ECM Documents**

Please define process app called **Demo-DocumentUploadV2-YourName**.

1. [ 5 marks ] Create a 2 step process
2. [ 5 marks ] Call the first step upload document. Create a Human Service called Upload Document HS
3. [ 6 marks ] Call the second step called View Document Human Task and create a Human Service called View Document HS
4. [ 6 marks ] Implement a Coach using a header and footer coach views to upload a document. Put a picture on the header with your own logo or a sample logo from the internet.
5. [ 6 marks ] Implement a Coach using a header and footer coach views to view a document you just uploaded
6. [ 6 marks ] Explain the concept called ECM Taxonomy. Describe the taxonomy of an ID Document and explain why.
7. [ 6 marks ] Please compare ECM filenet, Alfresco and Sharepoint pointing advantages and disadvantages as well market share. Please do not copy from the internet word by word.

**Question 14 ..**  
**BPM and Java Intergration**

Please define process app called **Demo-JavaIntergration-YourName**.

1. [ 5 marks ] Create a 2 step process
2. [ 5 marks ] Between the 2 processes call a Service Flow which has java intergration attached, and the jar file which is part of the document attached. show the results of the response of the service call to the java program on the last screen. Please use this manual, "<http://www.global-techhub.com/2017/11/integrate-java-service-in-ibm-bpm.html>"