Name of the Subject: DISTRIBUTED COMPUTER Subject Code: IT-717

Seat No: IT076 Student ID: 18ITUBN116 Branch/Sem: IT-VII

Q3 (a)

File (1)

TrigoWebService.java

```
package Trigo

import javax.jws.WebService;
import org.netbeans.j2ee.wsdl.trigowsdl.TrigoWSDLPortType;

@WebService(serviceName = "TrigoWSDLService", portName
    = "TrigoWSDLPort", endpointInterface = "org...",
    targetNamespace = "http://j2ee...",
    wsdlLocation = "WEB-INF/wsdl...")

public class TrigoWebService implements TrigoWSDLPortTyp
{
    public double trigoWSDLOperation(double angleA)
    {
        return Math.sin(angleA * Math.PI/180);
    }
}
```

File (2)

addition.java.

```
package src;

import javax.jws.WebMethod;
import javax.jws.WebParam;
import javax.jws.WebService;
```

@WebService()

```
public class addition
{
    @WebMethod(operationName = "addition")
    public double addition(@WebParam(name
                = "param1")
        double param1, @WebParam(name
                = "param2") double param2)
    {
        return param1 + param2;
    }
}
```

3.

(ii) Step to Create Interface Using Code First Approach.

(II) Creating Web Service Using Code First App.

(1) Create Web Application
- give it name addition.
- Give it name STTP-ArithService.

(2) Now, Select new & add Web Service. & then Provide Service name & Package name

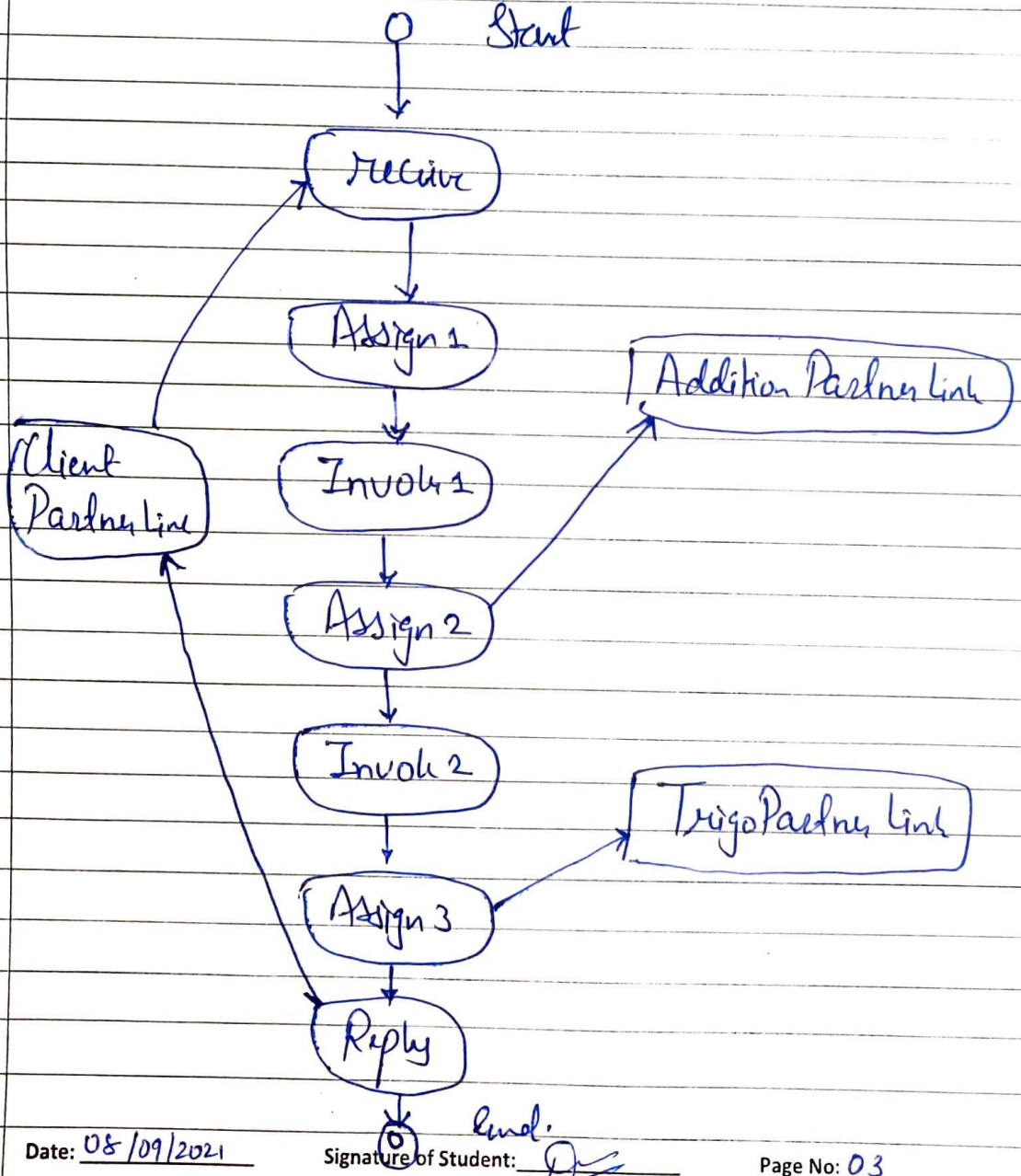
(3) Go to Design View & then add the operation for addition. & also Provide operation Name & Return Type

(4) Then go to the Source View of Web Service & Modify the code of Addition operation. then Clean & build the project. Deploy also.

(5) Then Select Project
↳ Web Service
↳ Arith Servr
↳ Test Web Servr

(6) Then Test Web Service.
(Similary for the Both web Services).

(iii) BPEL diagram.



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(1) We ~~Send~~ send the Input to BPEL process using Client Partner link by receive activity. Then receive activity assign variable.

(2) Then the Addition Partner link value from the user is send & then addition process is done by the Invoke activity.

(3) Then with the TrigPartner link the Trigo Calculation is done & it is send to the reply activity.

(4) The Reply activity get the ~~Client~~ answer & send it to client Partner link.

(iv) Test Composite.

input.xml.

<Soapenv: Envelope xmlns: xsi = " ">.

<Soapenv: Body>
<Sin: SinAPlusB Operation>
~~<part1>45</part1>~~
~~<part2>~~

<param1>45</param1>
<param2>45</param2>
</Sin: SinAPlusB Operation>
</Soap: Body>
</Soapenv: Envelop>.

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Q2 (b) (i) Servic by ESB.

- Mediation Servics.
  1. Routing
  2. Transformation.
- Event Servics.
  1. Publish & Subscribe
- Transport Servics.
  1. Synchronous / Asynchronous.
  2. Persistent / non - Persistant
  3. Loosely - Coupled / Trightly - Coupled.

(ii)

Sequence - for defining a set of activities that are involved in order. ✓ Sequence

Flow - Set of activities that will be involved parallel ✓

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Q2 (a)