

TECNOLOGIA DE OBJETOS
(Examen 1, duración 50 minutos)

NOMBRES Y APELLIDOS: _____

CUI: _____ FIRMA: _____

REGLAMENTO

Si se le encuentra realizando cualquier tipo de comportamiento o actitud deshonesta durante el examen. Sera sancionado con la anulación de su examen.

CASO

La empresa "Inca Store S.A." requiere de un sistema de facturación electrónica. El sistema de facturación electrónica básica de la SUNAT se compone de Factura, Boleta, Nota de Crédito, y Nota de Débito.

PREGUNTA 1

Analizar las especificaciones de la SUNAT correspondiente a Boleta, y proponer un diagrama de clases para el sistema de facturación. Para diseñar el diagrama de clases es obligatorio considerar los siguientes elementos AccountingSupplierParty, AccountingCustomerParty, y InvoiceLine. (3 puntos)

Las clases deberán mostrar atributos, métodos, relaciones, visibilidad (public, private, protected)

PREGUNTA 2

El diagrama clases deberá de permitir representar lo siguiente:

N	DESCRIPCION	PUNTAJE
1	Herencia simple y múltiple	3
2	Relación de agregación	2
3	Relación de composición	2
4	Interfaces o clases Abstractas	3
5	Alta/Baja cohesión	2
6	Alto/Bajo acoplamiento	2
7	Varianza, Covarianza, Contravarianza (*)	3

(*) Implementación parcial del código

ESQUEMA UBL 2.0 – BOLETA SUNAT**(Caso: Boleta de Venta de Zona Comercial Tacna)**

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="no"?>
<Invoice xmlns="urn:oasis:names:specification:ubl:schema:xsd:Invoice-2"
xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2"
xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
xmlns:ccts="urn:un:unece:uncefact:documentation:2"
xmlns:ds="http://www.w3.org/2000/09/xmldsig#"
xmlns:ext="urn:oasis:names:specification:ubl:schema:xsd:CommonExtensionComponents-2"
xmlns:qdt="urn:oasis:names:specification:ubl:schema:xsd:QualifiedDatatypes-2"
xmlns:sac="urn:sunat:names:specification:ubl:peru:schema:xsd:SunatAggregateComponents-1"
xmlns:udt="urn:un:unece:uncefact:data:specification:UnqualifiedDataTypesSchemaModule:2"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<ext:UBLExtensions>
<ext:UBLExtension>
    <ext:ExtensionContent>
        <sac:AdditionalInformation>
            <sac:AdditionalMonetaryTotal>
                <cbc:ID>1001</cbc:ID>
                <cbc:PayableAmount
currencyID="PEN">1407.29</cbc:PayableAmount>
            </sac:AdditionalMonetaryTotal>
            <sac:AdditionalMonetaryTotal>
                <cbc:ID>1004</cbc:ID>
                <cbc:PayableAmount
currencyID="PEN">48.00</cbc:PayableAmount>
            </sac:AdditionalMonetaryTotal>
            <sac:AdditionalMonetaryTotal>
                <cbc:ID>2005</cbc:ID>
                <cbc:PayableAmount
currencyID="PEN">74.07</cbc:PayableAmount>
            </sac:AdditionalMonetaryTotal>
            <sac:AdditionalProperty>
                <cbc:ID>1000</cbc:ID>
                <cbc:Value>SON MIL SEISCIENTOS SESENTA Y 60/100</cbc:Value>
            </sac:AdditionalProperty>
        </sac:AdditionalInformation>
    </ext:ExtensionContent>
</ext:UBLExtension>
<ext:UBLExtension><ext:ExtensionContent><ds:Signature
Id="signatureKG"></ds:Signature></ext:ExtensionContent></ext:UBLExtension></ext:UBLExtensions>
<cbc:UBLVersionID>2.0</cbc:UBLVersionID>
<cbc:CustomizationID>1.0</cbc:CustomizationID>
<cbc:ID>BC01-3652</cbc:ID>
<cbc:IssueDate>2012-06-24</cbc:IssueDate>
<cbc:InvoiceTypeCode>03</cbc:InvoiceTypeCode>
<cbc:DocumentCurrencyCode>PEN</cbc:DocumentCurrencyCode>
<cac:Signature>
    <cbc:ID>IDSigKG</cbc:ID>
    <cac:SignatoryParty>
```

```

        <cac:PartyIdentification>
            <cbc:ID>10200545523</cbc:ID>
        </cac:PartyIdentification>
        <cac:PartyName>
            <cbc:Name>VEGA POBLETE CARLOS ENRIQUE</cbc:Name>
        </cac:PartyName>
    </cac:SignatoryParty>
    <cac:DigitalSignatureAttachment>
        <cac:ExternalReference>
            <cbc:URI>#SignatureKG</cbc:URI>
        </cac:ExternalReference>
    </cac:DigitalSignatureAttachment>
</cac:Signature>
<cac:AccountingSupplierParty>
    <cbc:CustomerAssignedAccountID>10200545523</cbc:CustomerAssignedAccountID>
    <cbc:AdditionalAccountID>6</cbc:AdditionalAccountID>
    <cac:Party>
        <cac:PartyName>
            <cbc:Name>ELECTRODOMESTICOS CRUZ DE MOTUPE</cbc:Name>
        </cac:PartyName>
        <cac:PostalAddress>
            <cbc:AddressTypeCode>140106</cbc:AddressTypeCode>
        </cac:PostalAddress>
        <cac:PartyLegalEntity>
            <cbc:RegistrationName>VEGA POBLETE CARLOS
ENRIQUE</cbc:RegistrationName>
        </cac:PartyLegalEntity>
    </cac:Party>
</cac:AccountingSupplierParty>
<cac:AccountingCustomerParty>
    <cbc:CustomerAssignedAccountID>00078647</cbc:CustomerAssignedAccountID>
    <cbc:AdditionalAccountID>1</cbc:AdditionalAccountID>
    <cac:Party>
        <cac:PartyLegalEntity>
            <cbc:RegistrationName>SOLEDAD ASUNCION CARRASCO
PEREZ</cbc:RegistrationName>
        </cac:PartyLegalEntity>
    </cac:Party>
</cac:AccountingCustomerParty>
<cac:TaxTotal>
    <cbc:TaxAmount currencyID="PEN">253.31</cbc:TaxAmount>
    <cac:TaxSubtotal>
        <cbc:TaxAmount currencyID="PEN">253.31</cbc:TaxAmount>
        <cac:TaxCategory>
            <cac:TaxScheme>
                <cbc:ID>1000</cbc:ID>
                <cbc:Name>IGV</cbc:Name>
                <cbc:TaxTypeCode>VAT</cbc:TaxTypeCode>
            </cac:TaxScheme>
        </cac:TaxCategory>
    </cac:TaxSubtotal>

```

```

</cac:TaxTotal>
<cac:LegalMonetaryTotal>
  <cbc:PayableAmount currencyID="PEN">1660.60</cbc:PayableAmount>
</cac:LegalMonetaryTotal>
<cac:InvoiceLine>
  <cbc:ID>1</cbc:ID>
  <cbc:InvoicedQuantity unitCode="NIU">1</cbc:InvoicedQuantity>
  <cbc:LineExtensionAmount currencyID="PEN">845.76</cbc:LineExtensionAmount>
  <cac:PricingReference>
    <cac:AlternativeConditionPrice>
      <cbc:PriceAmount currencyID="PEN">998.00</cbc:PriceAmount>
      <cbc:PriceTypeCode>01</cbc:PriceTypeCode>
    </cac:AlternativeConditionPrice>
  </cac:PricingReference>
  <cac:TaxTotal>
    <cbc:TaxAmount currencyID="PEN">152.24</cbc:TaxAmount>
    <cac:TaxSubtotal>
      <cbc:TaxAmount currencyID="PEN">152.24</cbc:TaxAmount>
      <cac:TaxCategory>
        <cbc:TaxExemptionReasonCode>10</cbc:TaxExemptionReasonCode>
        <cac:TaxScheme>
          <cbc:ID>1000</cbc:ID>
          <cbc:Name>IGV</cbc:Name>
          <cbc:TaxTypeCode>VAT</cbc:TaxTypeCode>
        </cac:TaxScheme>
      </cac:TaxCategory>
    </cac:TaxSubtotal>
  </cac:TaxTotal>
  <cac:Item>
    <cbc:Description>Refrigeradora marca "AXM" no frost de 200
ltrs</cbc:Description>
    <cac:SellersItemIdentification>
      <cbc:ID>REF564</cbc:ID>
    </cac:SellersItemIdentification>
  </cac:Item>
  <cac:Price>
    <cbc:PriceAmount currencyID="PEN">845.76</cbc:PriceAmount>
  </cac:Price>
</cac:InvoiceLine>
<cac:InvoiceLine>
  <cbc:ID>2</cbc:ID>
  <cbc:InvoicedQuantity unitCode="NIU">1</cbc:InvoicedQuantity>
  <cbc:LineExtensionAmount currencyID="PEN">635.59</cbc:LineExtensionAmount>
  <cac:PricingReference>
    <cac:AlternativeConditionPrice>
      <cbc:PriceAmount currencyID="PEN">750.00</cbc:PriceAmount>
      <cbc:PriceTypeCode>01</cbc:PriceTypeCode>
    </cac:AlternativeConditionPrice>
  </cac:PricingReference>
  <cac:TaxTotal>
    <cbc:TaxAmount currencyID="PEN">114.41</cbc:TaxAmount>

```

```

        <cac:TaxSubtotal>
            <cbc:TaxAmount currencyID="PEN">114.41</cbc:TaxAmount>
            <cac:TaxCategory>

        <cbc:TaxExemptionReasonCode>10</cbc:TaxExemptionReasonCode>
            <cac:TaxScheme>
                <cbc:ID>1000</cbc:ID>
                <cbc:Name>IGV</cbc:Name>
                <cbc:TaxTypeCode>VAT</cbc:TaxTypeCode>
            </cac:TaxScheme>
        </cac:TaxCategory>
    </cac:TaxSubtotal>
</cac:TaxTotal>
<cac:Item>
    <cbc:Description>Cocina a gas GLP, marca "AXM" de 5 hornillas</cbc:Description>
    <cac:SellersItemIdentification>
        <cbc:ID>COC124</cbc:ID>
    </cac:SellersItemIdentification>
</cac:Item>
<cac:Price>
    <cbc:PriceAmount currencyID="PEN">635.59</cbc:PriceAmount>
</cac:Price>
</cac:InvoiceLine>
<cac:InvoiceLine>
    <cbc:ID>3</cbc:ID>
    <cbc:InvoicedQuantity unitCode="NIU">1</cbc:InvoicedQuantity>
    <cbc:LineExtensionAmount currencyID="PEN">0.00</cbc:LineExtensionAmount>
    <cac:PricingReference>
        <cac:AlternativeConditionPrice>
            <cbc:PriceAmount currencyID="PEN">0.00</cbc:PriceAmount>
            <cbc:PriceTypeCode>01</cbc:PriceTypeCode>
        </cac:AlternativeConditionPrice>
        <cac:AlternativeConditionPrice>
            <cbc:PriceAmount currencyID="PEN">4.80</cbc:PriceAmount>
            <cbc:PriceTypeCode>02</cbc:PriceTypeCode>
        </cac:AlternativeConditionPrice>
    </cac:PricingReference>
    <cac:TaxTotal>
        <cbc:TaxAmount currencyID="PEN">0.00</cbc:TaxAmount>
        <cac:TaxSubtotal>
            <cbc:TaxAmount currencyID="PEN">0.00</cbc:TaxAmount>
            <cac:TaxCategory>

        <cbc:TaxExemptionReasonCode>31</cbc:TaxExemptionReasonCode>
            <cac:TaxScheme>
                <cbc:ID>1000</cbc:ID>
                <cbc:Name>IGV</cbc:Name>
                <cbc:TaxTypeCode>VAT</cbc:TaxTypeCode>
            </cac:TaxScheme>
        </cac:TaxCategory>
    </cac:TaxSubtotal>

```

```
</cac:TaxTotal>
<cac:Item>
  <cbc:Description>Sixpack de gaseosa "GuaranÃi" de 400 ml.</cbc:Description>
  <cac:SellersItemIdentification>
    <cbc:ID>NOB012</cbc:ID>
  </cac:SellersItemIdentification>
</cac:Item>
<cac:Price>
  <cbc:PriceAmount currencyID="PEN">0.00</cbc:PriceAmount>
</cac:Price>
</cac:InvoiceLine>
</Invoice>
```

Fuente: <http://cpe.sunat.gob.pe/sites/default/files/inline-images/Gu%C3%ADa%20XML%20para%20boleta%20de%20venta%20electr%C3%B3nica%20%28UBL%202.0%29.pdf>