

Nama : Muhammad Fajar Ramadhan

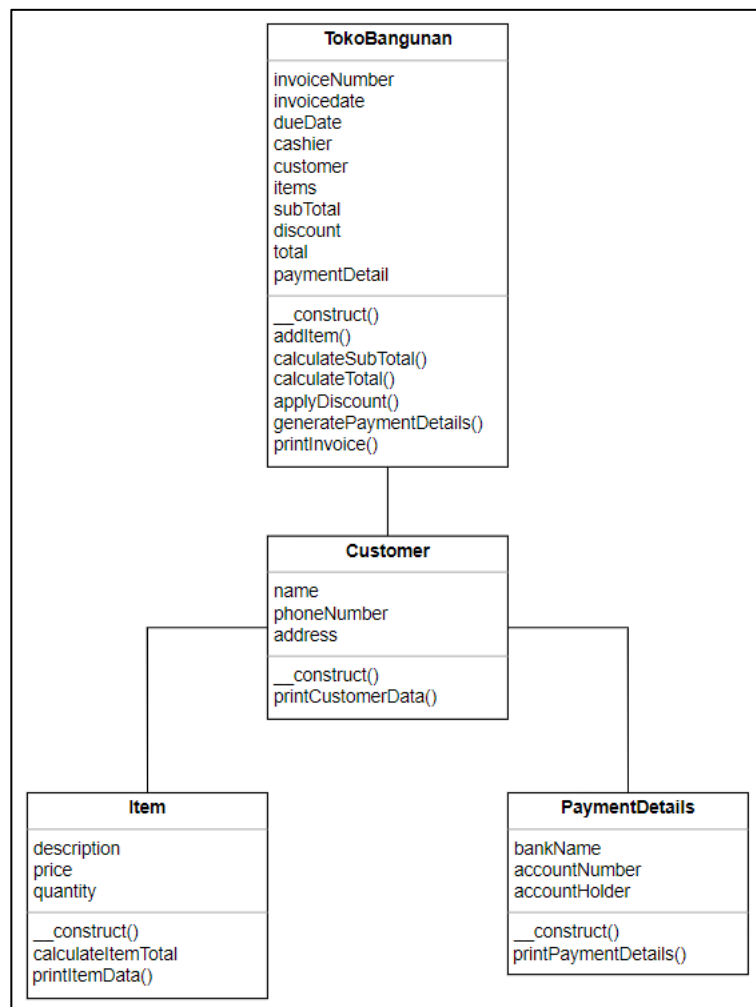
Prodi : Sistem Informasi

NPM : 4337857201220003

1) Silahkan analisa dari document dibawah ini, buat class diagramnya menggunakan draw.io dan buat programmnya.

Jawaban

1) Class Diagram:



2) Kode Program:

```
<?php

class TokoBangunan
{
    private $invoiceNumber;
    private $invoiceDate;
    private $dueDate;
    private $cashier;
    private $customer;
    private $items = [];
    private $subTotal;
    private $discount;
    private $total;
    private $paymentDetails;

    public function __construct($invoiceNumber, $invoiceDate, $dueDate, $cashier,
    $customer)
    {
        $this->invoiceNumber = $invoiceNumber;
        $this->invoiceDate = $invoiceDate;
        $this->dueDate = $dueDate;
        $this->cashier = $cashier;
        $this->customer = $customer;
    }

    public function addItem(Item $item)
    {
        $this->items[] = $item;
    }

    public function calculateSubTotal()
    {
        $subTotal = 0;
        foreach ($this->items as $item) {
            $subTotal += $item->calculateItemTotal();
        }
        $this->subTotal = $subTotal;
        return $subTotal;
    }

    public function calculateTotal()
    {
        $this->total = $this->subTotal * (1 - $this->discount / 100);
    }
}
```

```

        return $this->total;
    }

    public function applyDiscount($discount)
    {
        $this->discount = $discount;
    }

    public function generatePaymentDetails($bankName, $accountNumber,
$accountHolder)
    {
        $this->paymentDetails = new PaymentDetails($bankName, $accountNumber,
$accountHolder);
    }

    public function printInvoice()
    {
        // Cetak Customer
        echo "Invoice Details: <br>";
        echo "Invoice Number: " . $this->invoiceNumber . "<br>";
        echo "Invoice Date: " . $this->invoiceDate . "<br>";
        echo "Due Date: " . $this->dueDate . "<br>";
        echo "<br>";

        echo "Customer: <br>";
        $this->customer->printCustomer();
        echo "<br>";

        // Cetak item yang dibeli
        echo "Items: <br>";
        foreach ($this->items as $item) {
            $item->printItem();
        }
        echo "<br>";

        // Cetak detail pembayaran
        echo "Payment Total: <br>";
        echo "Sub Total: " . $this->subTotal . "<br>";
        echo "Discount: " . $this->discount . "%<br>";
        echo "Total: " . $this->total . "<br>";
        echo "<br>";

        echo "Payment Details: <br>";
        $this->paymentDetails->printPaymentDetails();
    }

```

```

    }
}
class Item
{
    private $description;
    private $price;
    private $quantity;

    public function __construct($description, $price, $quantity)
    {
        $this->description = $description;
        $this->price = $price;
        $this->quantity = $quantity;
    }

    public function calculateItemTotal()
    {
        return $this->price * $this->quantity;
    }

    public function printItem()
    {
        echo "Order Description: " . $this->description . ", Price: " . $this->price . ", Quantity: " . $this->quantity . "<br>";
    }
}

class Customer
{
    private $name;
    private $phoneNumber;
    private $address;

    public function __construct($name, $phoneNumber, $address)
    {
        $this->name = $name;
        $this->phoneNumber = $phoneNumber;
        $this->address = $address;
    }

    public function printCustomer()
    {
        echo "Name: " . $this->name . "<br>" . "Phone Number: " . $this->phoneNumber . "<br>" . "Address: " . $this->address . "<br>";
    }
}

```

```

}

class PaymentDetails
{
    private $bankName;
    private $accountNumber;
    private $accountHolder;

    public function __construct($bankName, $accountNumber, $accountHolder)
    {
        $this->bankName = $bankName;
        $this->accountNumber = $accountNumber;
        $this->accountHolder = $accountHolder;
    }

    public function printPaymentDetails()
    {
        echo "Bank Name: " . $this->bankName . "<br>" . "Account Number: " .
$this->accountNumber . "<br>" . "Account Holder: " . $this->accountHolder .
"<br>";
    }
}

// Contoh penggunaan:
$customer = new Customer("Muhammad Fajar Ramadhan", "+123-456-7890", "123
Anywhere St., Any City");

$invoice = new TokoBangunan("0001", "10/07/2024", "15/07/2024", "Juliana Silva",
$customer);

$item1 = new Item("Keramik rumah", 100000, 3);
$item2 = new Item("Batu kerikil", 60000, 2);
$item3 = new Item("Kertas amplas halus", 5000, 1);
$item4 = new Item("Semen", 50000, 5);
$item5 = new Item("Pasir putih", 30000, 2);

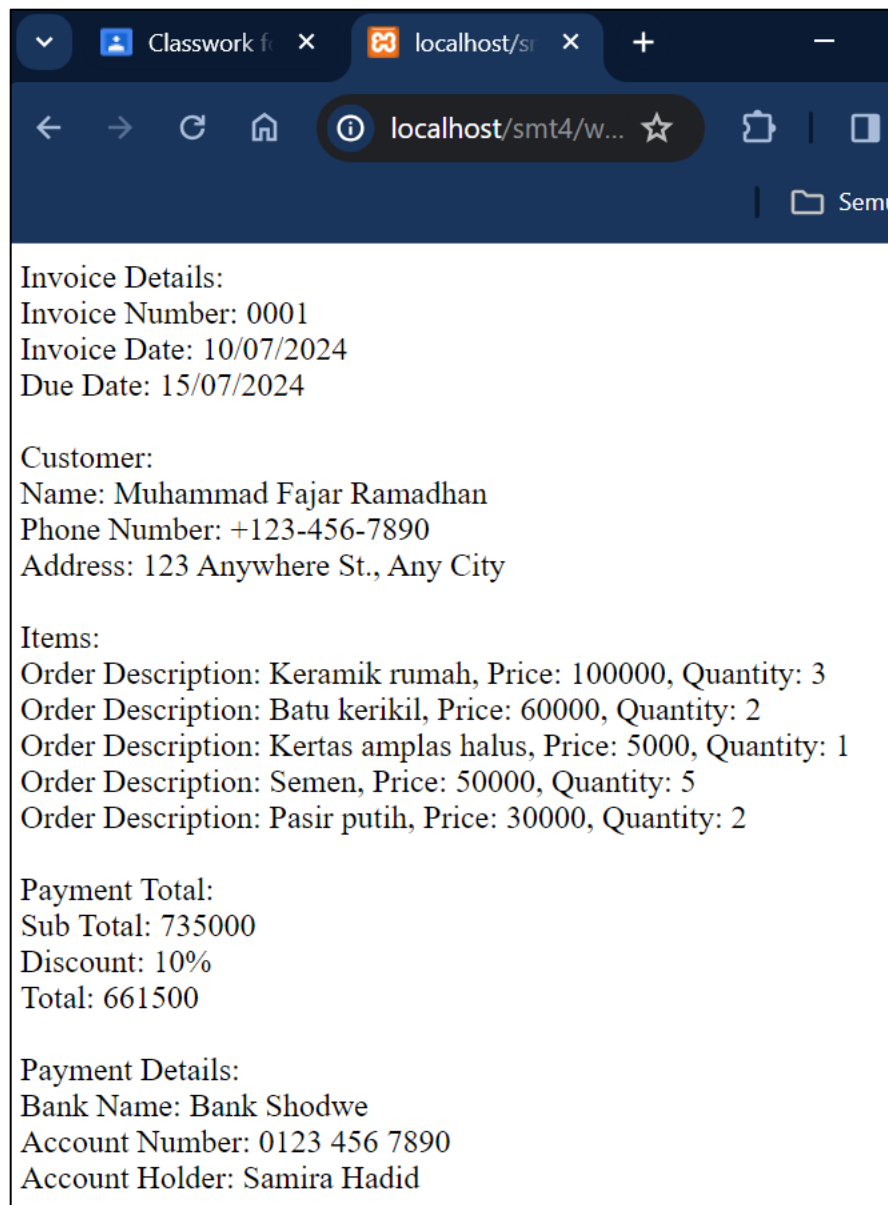
$invoice->addItem($item1);
$invoice->addItem($item2);
$invoice->addItem($item3);
$invoice->addItem($item4);
$invoice->addItem($item5);

$invoice->calculateSubTotal();
$invoice->applyDiscount(10); // Diskon 10%
$invoice->calculateTotal();

```

```
$invoice->generatePaymentDetails("Bank Shodwe", "0123 456 7890", "Samira Hadid");  
  
$invoice->printInvoice();
```

Output :



The screenshot shows a web browser window with a dark theme. The address bar displays 'localhost/smt4/w...'. The main content area shows an invoice with the following details:

Invoice Details:
Invoice Number: 0001
Invoice Date: 10/07/2024
Due Date: 15/07/2024

Customer:
Name: Muhammad Fajar Ramadhan
Phone Number: +123-456-7890
Address: 123 Anywhere St., Any City

Items:
Order Description: Keramik rumah, Price: 100000, Quantity: 3
Order Description: Batu kerikil, Price: 60000, Quantity: 2
Order Description: Kertas amplas halus, Price: 5000, Quantity: 1
Order Description: Semen, Price: 50000, Quantity: 5
Order Description: Pasir putih, Price: 30000, Quantity: 2

Payment Total:
Sub Total: 735000
Discount: 10%
Total: 661500

Payment Details:
Bank Name: Bank Shodwe
Account Number: 0123 456 7890
Account Holder: Samira Hadid