# section - 4.1

**code:**

```java
import java.util.Scanner;

public class Employee {
    private final String name;
    private final String username;
    private final String email;
    private String password;

    // Constructor
    public Employee() {
        this.name = setName();
        this.username = setUserName(name);
        this.email = setEmail(username);
        this.password = setPassword(username);
    }

    // Private method to count occurrences of a character in a string
    private int countChars(String str, char ch) {
        int count = 0;
        for (int i = 0; i < str.length(); i++) {
            if (str.charAt(i) == ch) {
                count++;
            }
        }
```

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        return count;

    }


    // Method to get the employee's name from user input
    private String setName() {

        Scanner scanner = new Scanner(System.in);

        String name;

        while (true) {

            System.out.print("Enter the employee's name (first and last name): ");

            name = scanner.nextLine();

            if (countChars(name, ' ') == 1) {

                break;

            } else {

                System.out.println("Please enter both first and last name separated by a space.");

            }

        }

        return name;

    }


    // Method to format the username
    private String setUserName(String name) {

        String[] parts = name.split(" ");

        if (parts.length != 2) {

            throw new IllegalArgumentException("Name should contain exactly first and last names.");

        }

        String firstName = parts[0].toLowerCase();

        String lastName = parts[1].toLowerCase();
```

```java
        return firstName + "." + lastName;

    }


    // Method to format the email address

    private String setEmail(String username) {

        String[] parts = username.split("¥¥.");

        if (parts.length != 2) {

            throw new IllegalArgumentException("Username should be in the format
'firstname.lastname'");

        }

        String firstInitial = parts[0].substring(0, 1);

        String lastName = parts[1];

        return firstInitial + lastName + "@oracleacademy.Test";

    }


    // Method to generate the initial password

    private String setPassword(String username) {

        StringBuilder passwordBuilder = new StringBuilder(username.length());

        for (char c : username.toCharArray()) {

            if ("aeiou".indexOf(c) != -1) {

                passwordBuilder.append('*');

            } else {

                passwordBuilder.append(c);

            }

        }


        // Ensure the password is exactly 8 characters long

        while (passwordBuilder.length() < 8) {
```

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            passwordBuilder.append('*');

        }

        if (passwordBuilder.length() > 8) {

            passwordBuilder.setLength(8);

        }


        // Capitalize the first letter of the password

        for (int i = 0; i < passwordBuilder.length(); i++) {

            char ch = passwordBuilder.charAt(i);

            if (Character.isLetter(ch)) {

                passwordBuilder.setCharAt(i, Character.toUpperCase(ch));

                break;

            }

        }


        return passwordBuilder.toString();

    }


    @Override
    public String toString() {

        return String.format(

            "Employee Details\nName : %s\nUsername : %s\nEmail : %s\nInitial Password : %s",

            name, username, email, password

        );

    }


    public static void main(String[] args) {

        Employee employee = new Employee();
```
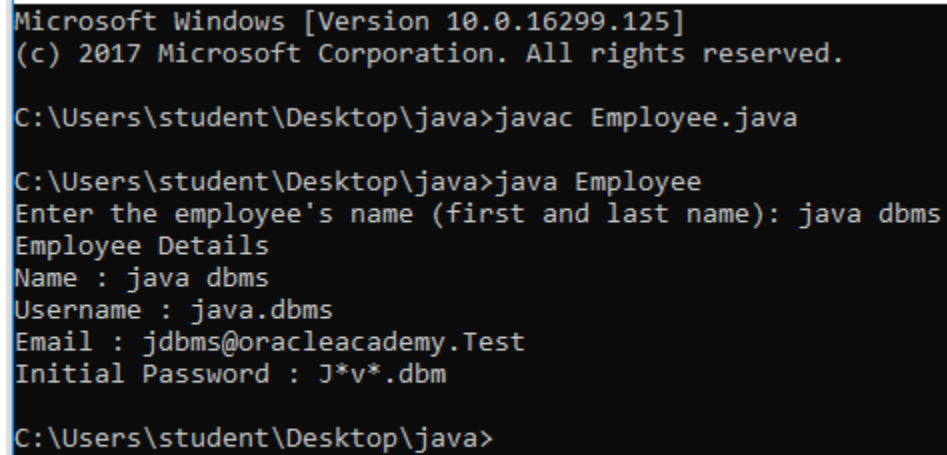
```
        System.out.println(employee);

    }

}
```

**output:**

```
Microsoft Windows [Version 10.0.16299.125]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\student\Desktop\java>javac Employee.java

C:\Users\student\Desktop\java>java Employee
Enter the employee's name (first and last name): java dbms
Employee Details
Name : java dbms
Username : java.dbms
Email : jdbms@oracleacademy.Test
Initial Password : J*v*.dbm

C:\Users\student\Desktop\java>
```