**1.package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**class** Student **implements** Comparable<Student> {

**private** **int** rollNo;

**private** String name;

**private** **double** marks;

**public** Student(**int** rollNo, String name, **double** marks) {

**this**.rollNo=rollNo;

**this**.name=name;

**this**.marks=marks;

}

**public** **int** getRollNo() {

**return** rollNo;

}

**public** String getName() {

**return** name;

}

**public** **double** getMarks() {

**return** marks;

}

**public** **int** compareTo(Student other) {

**return** Integer.*compare*(**this**.rollNo, other.rollNo);

}

**public** String toString() {

**return** "Roll No" +rollNo+"Name"+name+"Marks"+marks;

}

}

**public** **class** Q1 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Student> students = **new** ArrayList<>();

students.add(**new** Student(5, "A", 85.5));

students.add(**new** Student(2, "B", 90.0));

students.add(**new** Student(8, "C", 78.0));

students.add(**new** Student(1, "D", 92.0));

students.add(**new** Student(3, "E", 88.0));

System.***out***.println("Before sorting");

**for** (Student s:students) {

System.***out***.println(s);

}

Collections.*sort*(students);

System.***out***.println("\nAfter sorting");

**for** (Student s:students) {

System.***out***.println(s);

}

}

}

2. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**class** Product **implements** Comparable<Product> {

**private** String name;

**private** **double** price;

**public** Product(String name, **double** price) {

**this**.name=name;

**this**.price=price;

}

**public** String getName() {

**return** name;

}

**public** **double** getPrice() {

**return** price;

}

**public** **int** compareTo(Product other) {

**return** Double.*compare*(**this**.price, other.price);

}

**public** String toString() {

**return** "Product" + name+"Price"+price;

}

}

**public** **class** Q2 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Product> products = **new** ArrayList<>();

products.add(**new** Product("Laptop", 80000.0));

products.add(**new** Product("Mobile", 20000.0));

products.add(**new** Product("Tablet", 30000.0));

products.add(**new** Product("Desktop", 60000.0));

products.add(**new** Product("Smartwatch", 10000.0));

System.***out***.println("Before sorting:");

**for** (Product product : products) {

System.***out***.println(product);

}

Collections.*sort*(products);

System.***out***.println("\nAfter sorting:");

**for** (Product pr:products) {

System.***out***.println(pr);

}

}

}

3. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**class** Employee **implements** Comparable<Employee> {

**private** String name;

**private** **int** id;

**private** **double** salary;

**public** Employee(String name, **int** id, **double** salary) {

**this**.name=name;

**this**.id=id;

**this**.salary=salary;

}

**public** String getName() {

**return** name;

}

**public** **int** getId() {

**return** id;

}

**public** **double** getSalary() {

**return** salary;

}

@Override

**public** **int** compareTo(Employee other) {

**return** **this**.name.compareTo(other.name);

}

@Override

**public** String toString() {

**return** "Name"+name + "ID: " + id + ", Salary" +salary;

}

}

**public** **class** Q3 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Employee> employees = **new** ArrayList<>();

employees.add(**new** Employee("A", 101, 50000.0));

employees.add(**new** Employee("B", 102, 60000.0));

employees.add(**new** Employee("C", 103, 55000.0));

employees.add(**new** Employee("D", 104, 70000.0));

employees.add(**new** Employee("E", 105, 45000.0));

System.***out***.println("Before sorting:");

**for** (Employee e: employees) {

System.***out***.println(e);

}

Collections.*sort*(employees);

System.***out***.println("\nAfter sorting:");

**for** (Employee e: employees) {

System.***out***.println(e);

}

}

}

4. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**class** Book **implements** Comparable<Book> {

**private** **int** bookId;

**private** String title;

**private** String author;

**public** Book(**int** bookId, String title, String author) {

**this**.bookId =bookId;

**this**.title =title;

**this**.author= author;

}

**public** **int** getBookId() {

**return** bookId;

}

**public** String getTitle() {

**return** title;

}

**public** String getAuthor() {

**return** author;

}

**public** **int** compareTo(Book other) {

**return** Integer.*compare*(other.bookId, **this**.bookId);

}

**public** String toString() {

**return** "BookId" + bookId+",Title"+title+", Author"+author;

}

}

**public** **class** Q4 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Book> books = **new** ArrayList<>();

books.add(**new** Book(101,"Book A", "Author A"));

books.add(**new** Book(105,"Book E", "Author E"));

books.add(**new** Book(103, "Book C","Author C"));

books.add(**new** Book(102, "Book B","Author B"));

books.add(**new** Book(104, "Book D", "Author D"));

System.***out***.println("Before sorting:");

**for** (Book b:books) {

System.***out***.println(b);

}

Collections.*sort*(books);

System.***out***.println("\nAfter sorting:");

**for** (Book b: books) {

System.***out***.println(b);

}

}

}

5. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**class** Employe **implements** Comparable<Employe> {

**private** String name;

**private** **int** age;

**private** **double** salary;

**public** Employe(String name, **int** age, **double** salary) {

**this**.name = name;

**this**.age = age;

**this**.salary = salary;

}

**public** String getName() {

**return** name;

}

**public** **int** getAge() {

**return** age;

}

**public** **double** getSalary() {

**return** salary;

}

@Override

**public** **int** compareTo(Employe other) {

// Sort by age

**return** Integer.*compare*(**this**.age, other.age);

}

@Override

**public** String toString() {

**return** "Name: " + name + ", Age: " + age + ", Salary: " + salary;

}

}

**public** **class** Q5 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Employee> employees = **new** ArrayList<>();

employees.add(**new** Employee("a", 30, 50000.0));

employees.add(**new** Employee("b", 25, 60000.0));

employees.add(**new** Employee("c", 35, 55000.0));

employees.add(**new** Employee("d", 28, 70000.0));

employees.add(**new** Employee("e", 40, 45000.0));

System.***out***.println("Before sorting:");

**for** (Employee e:employees) {

System.***out***.println(e);

}

Collections.*sort*(employees);

System.***out***.println("\nAfter sorting:");

**for** (Employee e:employees) {

System.***out***.println(e);

}

}

}

6. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Stu {

**private** String name;

**private** **double** marks;

**public** Stu(String name, **double** marks) {

**this**.name = name;

**this**.marks = marks;

}

**public** String getName() {

**return** name;

}

**public** **double** getMarks() {

**return** marks;

}

@Override

**public** String toString() {

**return** "Name: " + name + ", Marks: " + marks;

}

}

**public** **class** Q6 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Stu> students = **new** ArrayList<>();

students.add(**new** Stu("John", 85.0));

students.add(**new** Stu("Alice", 90.0));

students.add(**new** Stu("Bob", 78.0));

students.add(**new** Stu("Eve", 92.0));

students.add(**new** Stu("Charlie", 88.0));

System.***out***.println("Before sorting:");

**for** (Stu student : students) {

System.***out***.println(student);

}

Collections.*sort*(students, (s1, s2) -> Double.*compare*(s2.getMarks(), s1.getMarks()));

System.***out***.println("\nAfter sorting:");

**for** (Stu student : students) {

System.***out***.println(student);

}

}

}

7. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Pro{

**private** String name;

**private** **double** price;

**public** Pro(String name, **double** price) {

**this**.name=name;

**this**.price=price;

}

**public** String getName() {

**return** name;

}

**public** **double** getPrice() {

**return** price;

}

**public** String toString() {

**return** "Product"+name+"Price"+price;

}

}

**public** **class** Q7 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Pro> products = **new** ArrayList<>();

products.add(**new** Pro("Laptop", 80000.0));

products.add(**new** Pro("Mobile", 20000.0));

products.add(**new** Pro("Tablet", 30000.0));

products.add(**new** Pro("Desktop", 60000.0));

products.add(**new** Pro("Smartwatch", 10000.0));

System.***out***.println("Before sorting:");

**for** (Pro product : products) {

System.***out***.println(product);

}

Collections.*sort*(products, Comparator.*comparingDouble*(Pro::getPrice));

System.***out***.println("\nAfter sorting by price asc");

**for** (Pro product : products) {

System.***out***.println(product);

}

Collections.*sort*(products, Comparator.*comparingDouble*(Pro::getPrice).reversed());

System.***out***.println("\nAfter sorting by price desc");

**for** (Pro product : products) {

System.***out***.println(product);

}

Collections.*sort*(products, Comparator.*comparing*(Pro::getName));

System.***out***.println("\nAfter sorting by name alpha");

**for** (Pro p:products) {

System.***out***.println(p);

}

}

}

8. **package** day9\_assign;

**import** java.time.LocalDate;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Staff {

**private** String name;

**private** LocalDate joiningDate;

**public** Staff(String name, LocalDate joiningDate) {

**this**.name = name;

**this**.joiningDate = joiningDate;

}

**public** String getName() {

**return** name;

}

**public** LocalDate getJoiningDate() {

**return** joiningDate;

}

@Override

**public** String toString() {

**return** "Name"+name+"Joining Date"+joiningDate;

}

}

**public** **class** Q8 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<Staff> staffM= **new** ArrayList<>();

staffM.add(**new** Staff("A", LocalDate.*of*(2020, 1, 1)));

staffM.add(**new** Staff("B", LocalDate.*of*(2018, 6, 15)));

staffM.add(**new** Staff("c", LocalDate.*of*(2022, 3, 10)));

staffM.add(**new** Staff("d", LocalDate.*of*(2019, 9, 20)));

staffM.add(**new** Staff("e", LocalDate.*of*(2021, 11, 25)));

System.***out***.println("Before sorting:");

**for** (Staff s:staffM) {

System.***out***.println(s);

}

Collections.*sort*(staffM, Comparator.*comparing*(Staff::getJoiningDate));

System.***out***.println("\nAfter sorting by joining date asc");

**for** (Staff s:staffM) {

System.***out***.println(s);

}

Collections.*sort*(staffM, Comparator.*comparing*(Staff::getJoiningDate).reversed());

System.***out***.println("\nAfter sorting by joining date desc");

**for** (Staff s:staffM) {

System.***out***.println(s);

}

}

}

9. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** City {

**private** String name;

**private** **int** population;

**public** City(String name, **int** population) {

**this**.name = name;

**this**.population = population;

}

**public** String getName() {

**return** name;

}

**public** **int** getPopulation() {

**return** population;

}

@Override

**public** String toString() {

**return** "City"+ name+ "Population"+population;

}

}

**public** **class** Q9 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<City> cities = **new** ArrayList<>();

cities.add(**new** City("New York", 8537673));

cities.add(**new** City("Los Angeles", 3976321));

cities.add(**new** City("Chicago", 2720590));

cities.add(**new** City("Houston", 2320268));

cities.add(**new** City("Phoenix", 1732125));

System.***out***.println("Before sorting");

**for** (City city : cities) {

System.***out***.println(city);

}

Collections.*sort*(cities, Comparator.*comparingInt*(City::getPopulation));

System.***out***.println("\nAfter sorting by pop ascending:");

**for** (City c:cities) {

System.***out***.println(c);

}

Collections.*sort*(cities, Comparator.*comparingInt*(City::getPopulation).reversed());

System.***out***.println("\nAfter sorting by pop descending:");

**for** (City c: cities) {

System.***out***.println(c);

}

}

}

10. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**public** **class** Q10 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

List<String> strings = **new** ArrayList<>();

strings.add("apple");

strings.add("banana");

strings.add("cat");

strings.add("elephant");

strings.add("dog");

System.***out***.println("Before sorting:");

**for** (String str : strings) {

System.***out***.println(str);

}

Collections.*sort*(strings, **new** Comparator<String>() {

**public** **int** compare(String s1, String s2) {

**return** Integer.*compare*(s1.length(), s2.length());

}

});

System.***out***.println("\nAfter sorting:");

**for** (String str : strings) {

System.***out***.println(str);

}

}

}

11. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Stud **implements** Comparable<Stud> {

**private** String name;

**private** **double** marks;

**public** Stud(String name, **double** marks) {

**this**.name = name;

**this**.marks = marks;

}

**public** String getName() {

**return** name;

}

**public** **double** getMarks() {

**return** marks;

}

@Override

**public** **int** compareTo(Stud other) {

**return** **this**.name.compareTo(other.name);

}

@Override

**public** String toString() {

**return** "Name"+ name+"Marks"+marks;

}

}

**public** **class** Q11 {

**public** **static** **void** main(String[] args) {

List<Stud> students = **new** ArrayList<>();

students.add(**new** Stud("John", 85.0));

students.add(**new** Stud("Alice", 90.0));

students.add(**new** Stud("Bob", 78.0));

students.add(**new** Stud("Eve", 92.0));

students.add(**new** Stud("Charlie", 88.0));

System.***out***.println("Before sorting");

**for** (Stud student : students) {

System.***out***.println(student);

}

Collections.*sort*(students);

System.***out***.println("\nAfter sorting by name");

**for** (Stud student : students) {

System.***out***.println(student);

}

Collections.*sort*(students, Comparator.*comparingDouble*(Stud::getMarks));

System.***out***.println("\nAfter sorting by marks asc");

**for** (Stud student : students) {

System.***out***.println(student);

}

Collections.*sort*(students, Comparator.*comparingDouble*(Stud::getMarks).reversed());

System.***out***.println("\nAfter sorting by marks desc");

**for** (Stud student : students) {

System.***out***.println(student);

}

}

}

12. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Book1 **implements** Comparable<Book1> {

**private** **int** id;

**private** String title;

**private** String author;

**public** Book1(**int** id, String title, String author) {

**this**.id =id;

**this**.title=title;

**this**.author= author;

}

**public** **int** getId() {

**return** id;

}

**public** String getTitle() {

**return** title;

}

**public** String getAuthor() {

**return** author;

}

**public** **int** compareTo(Book1 other) {

**return** Integer.*compare*(**this**.id, other.id);

}

**public** String toString() {

**return** "ID"+id + "Title"+title + "Author" + author;

}

}

**public** **class** Q12 {

**public** **static** **void** main(String[] args) {

List<Book1> books = **new** ArrayList<>();

books.add(**new** Book1(3, "Book C", "Author C"));

books.add(**new** Book1(1, "Book A", "Author A"));

books.add(**new** Book1(2, "Book B", "Author B"));

books.add(**new** Book1(4, "Book D", "Author D"));

books.add(**new** Book1(5, "Book E", "Author E"));

System.***out***.println("Before sorting:");

**for** (Book1 book : books) {

System.***out***.println(book);

}

Collections.*sort*(books);

System.***out***.println("\nAfter sorting by ID:");

**for** (Book1 book : books) {

System.***out***.println(book);

}

Collections.*sort*(books, Comparator.*comparing*(Book1::getTitle));

System.***out***.println("\nAfter sorting by title:");

**for** (Book1 book : books) {

System.***out***.println(book);

}

Collections.*sort*(books, **new** TitleAuthorComparator());

System.***out***.println("\nAfter sorting by title and then author:");

**for** (Book1 book : books) {

System.***out***.println(book);

}

}

}

**class** TitleAuthorComparator **implements** Comparator<Book1> {

@Override

**public** **int** compare(Book1 b1, Book1 b2) {

**int** titleCompare = b1.getTitle().compareTo(b2.getTitle());

**if** (titleCompare == 0) {

**return** b1.getAuthor().compareTo(b2.getAuthor());

}

**return** titleCompare;

}

}

13. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Employ {

String name;

**double** salary;

String department;

**public** Employ(String name, **double** salary, String department) {

**this**.name = name;

**this**.salary = salary;

**this**.department = department;

}

@Override

**public** String toString() {

**return** "Name"+name+"Salary "+salary+"Department"+department;

}

}

**public** **class** Q13 {

**public** **static** **void** main(String[] args) {

List<Employ> employees = **new** ArrayList<>();

employees.add(**new** Employ("John", 50000.0, "Sales"));

employees.add(**new** Employ("Jan", 60000.0, "Marketing"));

employees.add(**new** Employ("Bob", 55000.0, "Sales"));

System.***out***.println("Before sorting:");

**for** (Employ employee : employees) {

System.***out***.println(employee);

}

Collections.*sort*(employees, Comparator.*comparing*(e -> e.name));

System.***out***.println("\nAfter sorting by name:");

**for** (Employ employee : employees) {

System.***out***.println(employee);

}

Collections.*sort*(employees, Comparator.*comparingDouble*(e -> e.salary));

System.***out***.println("\nAfter sorting by salary:");

**for** (Employ employee : employees) {

System.***out***.println(employee);

}

Collections.*sort*(employees, Comparator.*comparing*(e -> e.department));

System.***out***.println("\nAfter sorting by department:");

**for** (Employ employee : employees) {

System.***out***.println(employee);

}

}

}

14. **package** day9\_assign;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Comparator;

**import** java.util.List;

**class** Person {

**private** String name;

**private** **int** age;

**public** Person(String name, **int** age) {

**this**.name = name;

**this**.age = age;

}

**public** String getName() {

**return** name;

}

**public** **int** getAge() {

**return** age;

}

@Override

**public** String toString() {

**return** "Name"+name+"Age"+age;

}

}

**public** **class** Q14 {

**public** **static** **void** main(String[] args) {

List<Person> people = **new** ArrayList<>();

people.add(**new** Person("C", 30));

people.add(**new** Person("A", 25));

people.add(**new** Person("B", 35));

System.***out***.println("Before sorting:");

**for** (Person person : people) {

System.***out***.println(person);

}

Collections.*sort*(people, Comparator.*comparing*(Person::getName));

System.***out***.println("\nAfter sorting by name:");

**for** (Person person : people) {

System.***out***.println(person);

}

Collections.*sort*(people, Comparator.*comparingInt*(Person::getAge));

System.***out***.println("\nAfter sorting by age:");

**for** (Person person : people) {

System.***out***.println(person);

}

}

}

15. **package** day9\_assign;

**import** java.util.Comparator;

**import** java.util.TreeSet;

**class** Per {

String name;

**int** age;

**public** Per(String name, **int** age) {

**this**.name=name;

**this**.age=age;

}

**public** String toString() {

**return** "Name"+name+",Age"+age;

}

}

**public** **class** Q15 {

**public** **static** **void** main(String[] args) {

TreeSet<Per> personSet = **new** TreeSet<>(Comparator.*comparingInt*(p -> p.age));

personSet.add(**new** Per("J", 30));

personSet.add(**new** Per("A", 25));

personSet.add(**new** Per("C", 35));

**for** (Per p:personSet) {

System.***out***.println(p);

}

}

}

16. **package** day9\_assign;

**import** java.io.FileWriter;

**import** java.io.IOException;

**public** **class** Q16 {

**public** **static** **void** main(String[] args) {

**try** (FileWriter writer = **new** FileWriter("stu1.txt")) {

writer.write("J\n");

writer.write("Jfm\n");

writer.write("Bfemk\n");

writer.write("Afrmv\n");

writer.write("Mdmvf\n");

System.***out***.println("File created and written");

} **catch** (IOException e) {

System.***out***.println("Error"+e.getMessage());

}

}

}

17, **package** day9\_assign;

**import** java.io.BufferedReader;

**import** java.io.FileReader;

**import** java.io.IOException;

**public** **class** Q17 {

**public** **static** **void** main(String[] args) {

**try** (BufferedReader reader = **new** BufferedReader(**new** FileReader("stu1.txt"))) {

String line;

**while** ((line = reader.readLine()) != **null**) {

System.***out***.println(line);

}

} **catch** (IOException e) {

System.***out***.println("Error reading file: " + e.getMessage());

}

}

}

18. **package** day9\_assign;

**import** java.io.FileWriter;

**import** java.io.IOException;

**public** **class** Q18 {

**public** **static** **void** main(String[] args) {

**try** (FileWriter writer = **new** FileWriter("stu1.txt", **true**)) {

writer.write("Emily Davis\n");

System.***out***.println("Data appended");

} **catch** (IOException e) {

System.***out***.println("Error" + e.getMessage());

}

}

}

19. **package** day9\_assign;

**import** java.io.BufferedReader;

**import** java.io.FileReader;

**import** java.io.IOException;

**public** **class** Q19 {

**public** **static** **void** main(String[] args) {

**int** wordC=0;

**int** lineC = 0;

**try** (BufferedReader reader = **new** BufferedReader(**new** FileReader("notes.txt"))) {

String line;

**while** ((line = reader.readLine()) != **null**) {

lineC++;

wordC+= line.split("\\s+").length;

}

System.***out***.println("Numof lines"+lineC);

System.***out***.println("Num of words"+wordC);

} **catch** (IOException e) {

System.***out***.println("Error reading file"+e.getMessage());

}

}

}

20. **package** day9\_assign;

**import** java.io.BufferedReader;

**import** java.io.BufferedWriter;

**import** java.io.FileReader;

**import** java.io.FileWriter;

**import** java.io.IOException;

**public** **class** Q20 {

**public** **static** **void** main(String[] args) {

**try** (BufferedReader reader = **new** BufferedReader(**new** FileReader("stu1.txt"));

BufferedWriter writer = **new** BufferedWriter(**new** FileWriter("notes.txt"))) {

String line;

**while** ((line = reader.readLine()) != **null**) {

writer.write(line);

writer.newLine();

}

System.***out***.println("File copied successfully");

} **catch** (IOException e) {

System.***out***.println("Error " + e.getMessage());

}

}

}

21, **package** day9\_assign;

**import** java.io.File;

**public** **class** Q21 {

**public** **static** **void** main(String[] args) {

File file = **new** File("report.txt");

**if** (file.exists()) {

System.***out***.println("File exists.");

System.***out***.println("Absolute path: " + file.getAbsolutePath());

System.***out***.println("File name: " + file.getName());

System.***out***.println("Writable: " + file.canWrite());

System.***out***.println("Readable: " + file.canRead());

System.***out***.println("File size in bytes: " + file.length());

} **else** {

System.***out***.println("File does not exist.");

}

}

}

22. **package** day9\_assign;

**import** java.io.FileWriter;

**import** java.io.IOException;

**import** java.util.Scanner;

**public** **class** Q22 {

**public** **static** **void** main(String[] args) {

Scanner scanner = **new** Scanner(System.***in***);

**try** (FileWriter writer = **new** FileWriter("userinput.txt")) {

System.***out***.println("Enter your input");

**while** (**true**) {

String input = scanner.nextLine();

**if** (input.equalsIgnoreCase("exit")) {

**break**;

}

writer.write(input + "\n");

}

System.***out***.println("Input written");

} **catch** (IOException e) {

System.***out***.println("Erro" + e.getMessage());

} **finally** {

scanner.close();

}

}

}

23. **package** day9\_assign;

**import** java.io.IOException;

**import** java.nio.file.Files;

**import** java.nio.file.Paths;

**import** java.util.Collections;

**import** java.util.List;

**public** **class** Q23 {

**public** **static** **void** main(String[] args) {

**try** {

List<String> lines = Files.*readAllLines*(Paths.*get*("data.txt"));

Collections.*reverse*(lines);

Files.*write*(Paths.*get*("reversed.txt"), lines);

System.***out***.println("Reversed file created");

} **catch** (IOException e) {

System.***out***.println("Error: " + e.getMessage());

}

}

}

24. **package** day9\_assign;

**import** java.io.FileOutputStream;

**import** java.io.ObjectOutputStream;

**import** java.io.Serializable;

**class** Stu2 **implements** Serializable {

**private** **int** id;

**private** String name;

**private** **double** marks;

**public** Stu2(**int** id, String name, **double** marks) {

**this**.id = id;

**this**.name =name;

**this**.marks =marks;

}

**public** String toString() {

**return** "Student [id="+id+"name=" + name + ", marks="+marks+"]";

}

}

**public** **class** Q24 {

**public** **static** **void** main(String[] args) {

Stu2 student = **new** Stu2(1, "Jfmf", 85.5);

**try** (ObjectOutputStream oos = **new** ObjectOutputStream(**new** FileOutputStream("student.ser"))) {

oos.writeObject(student);

System.***out***.println("Student object serialized and saved");

} **catch** (Exception e) {

System.***out***.println("Error" + e.getMessage());

}

}

}

25. /\*package day9\_assign;

import java.io.FileInputStream;

import java.io.ObjectInputStream;

import java.io.Serializable;

// Define the Student class in the same package

class Stu2 implements Serializable {

private int id;

private String name;

private double marks;

public Stu2(int id, String name, double marks) {

this.id = id;

this.name =name;

this.marks= marks;

}

public String toString() {

return "Student [id="+id+"name="+ name+",marks="+marks + "]";

}

}

public class Q25 {

public static void main(String[] args) {

try (ObjectInputStream ois = new ObjectInputStream(new FileInputStream("student.ser"))) {

Stu2 student = (Stu2) ois.readObject();

System.out.println("Deserialized Student Object:");

System.out.println(student);

} catch (Exception e) {

System.out.println("Error " + e.getMessage());

}

}

}

\*/

26. **package** day9\_assign;

**import** java.io.File;

**import** java.util.Scanner;

**public** **class** Q26 {

**public** **static** **void** main(String[] args) {

Scanner scanner = **new** Scanner(System.***in***);

System.***out***.println("Enter the directory path");

String path = scanner.nextLine();

scanner.close();

File directory = **new** File(path);

**if** (directory.exists() && directory.isDirectory()) {

File[] files = directory.listFiles();

**if** (files != **null**) {

System.***out***.println("Files in the directory");

**for** (File file : files) {

**if** (file.isFile()) {

System.***out***.println(file.getName());

}

}

} **else** {

System.***out***.println("No files found");

}

} **else** {

System.***out***.println("Invalid");

}

}

}

27. **package** day9\_assign;

**import** java.io.IOException;

**import** java.nio.file.Files;

**import** java.nio.file.Paths;

**public** **class** Q27 {

**public** **static** **void** main(String[] args) {

String fileName = "delete1.txt";

**try** {

**if** (Files.*deleteIfExists*(Paths.*get*(fileName))) {

System.***out***.println("File deleted");

} **else** {

System.***out***.println("File does not exist");

}

} **catch** (IOException e) {

System.***out***.println("Error" + e.getMessage());

}

}

}

28. **package** day9\_assign;

**import** java.io.File;

**import** java.io.FileNotFoundException;

**import** java.util.Scanner;

**public** **class** Q28{

**public** **static** **void** main(String[] args) {

Scanner scanner = **new** Scanner(System.***in***);

System.***out***.println("Enter a word to search:");

String word = scanner.nextLine();

scanner.close();

**try** {

File file = **new** File("notes.txt");

Scanner fileScanner = **new** Scanner(file);

**boolean** found = **false**;

**while** (fileScanner.hasNextLine()) {

String line = fileScanner.nextLine();

**if** (line.toLowerCase().contains(word.toLowerCase())) {

found = **true**;

**break**;

}

}

fileScanner.close();

**if** (found) {

System.***out***.println("Word found");

} **else** {

System.***out***.println("Word not found.");

}

} **catch** (FileNotFoundException e) {

System.***out***.println("File not foun");

}

}

}

29. **package** day9\_assign;

**import** java.io.File;

**import** java.io.FileNotFoundException;

**import** java.io.FileWriter;

**import** java.io.IOException;

**import** java.util.Scanner;

**public** **class** Q29 {

**public** **static** **void** main(String[] args) {

**try** {

File file = **new** File("story.txt");

Scanner scanner = **new** Scanner(file);

StringBuilder content = **new** StringBuilder();

**while** (scanner.hasNextLine()) {

String line = scanner.nextLine();

content.append(line).append("\n");

}

scanner.close();

String updatedContent = content.toString().replaceAll("(?i)Java", "Python");

FileWriter writer = **new** FileWriter("\_story.txt");

writer.write(updatedContent);

writer.close();

System.***out***.println("Content updated and written ");

} **catch** (FileNotFoundException e) {

System.***out***.println("File not found");

} **catch** (IOException e) {

System.***out***.println("Error" + e.getMessage());

}

}

}