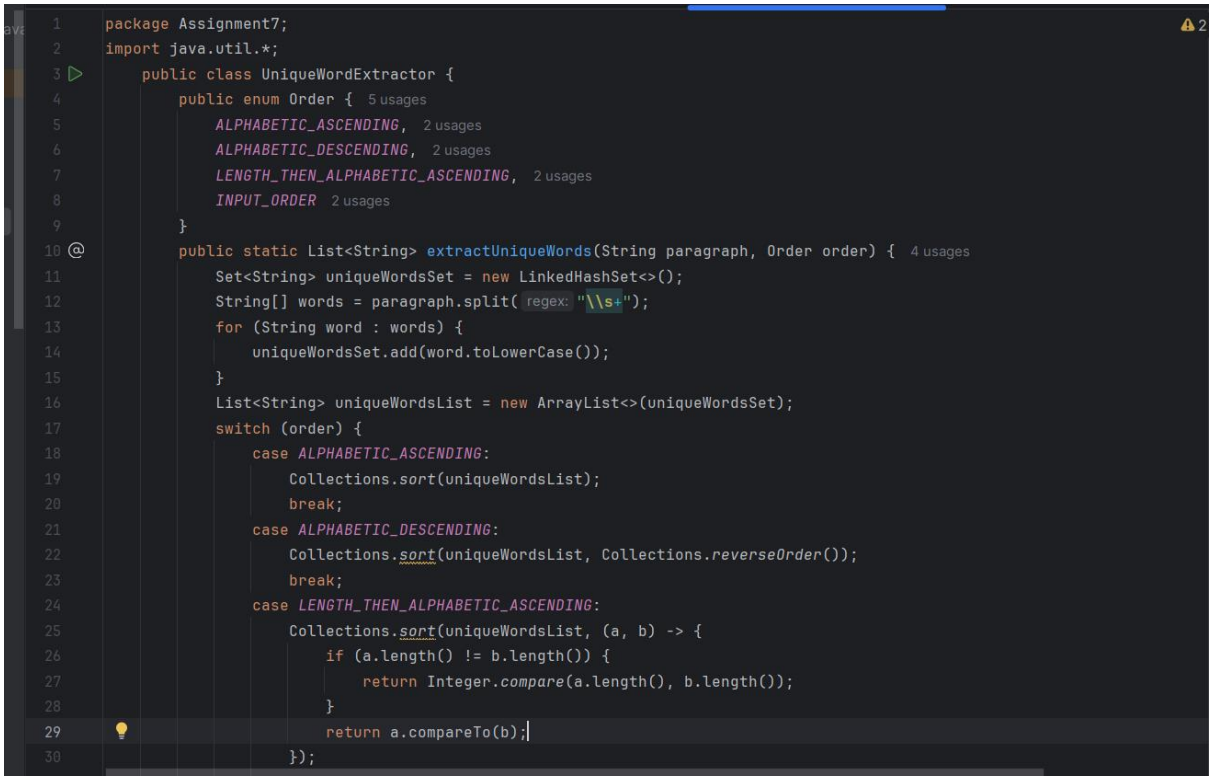
Assignment-7

SET CREATION AND SORTING:

CODE:



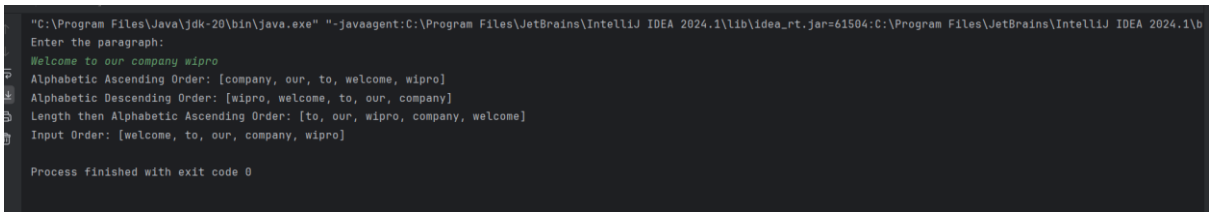
```java
package Assignment7;
import java.util.*;
    public class UniqueWordExtractor {
        public enum Order {  5 usages
            ALPHABETIC_ASCENDING,  2 usages
            ALPHABETIC_DESCENDING,  2 usages
            LENGTH_THEN_ALPHABETIC_ASCENDING,  2 usages
            INPUT_ORDER  2 usages
        }
        public static List<String> extractUniqueWords(String paragraph, Order order) {  4 usages
            Set<String> uniqueWordsSet = new LinkedHashSet<>();
            String[] words = paragraph.split( regex: "\\s+");
            for (String word : words) {
                uniqueWordsSet.add(word.toLowerCase());
            }
            List<String> uniqueWordsList = new ArrayList<>(uniqueWordsSet);
            switch (order) {
                case ALPHABETIC_ASCENDING:
                    Collections.sort(uniqueWordsList);
                    break;
                case ALPHABETIC_DESCENDING:
                    Collections.sort(uniqueWordsList, Collections.reverseOrder());
                    break;
                case LENGTH_THEN_ALPHABETIC_ASCENDING:
                    Collections.sort(uniqueWordsList, (a, b) -> {
                        if (a.length() != b.length()) {
                            return Integer.compare(a.length(), b.length());
                        }
                        return a.compareTo(b);
                    });
```

```java
                break;
            case INPUT_ORDER:
                break;
        }

        return uniqueWordsList;
    }

    public static void main(String[] args) {
        Scanner sc =new Scanner(System.in);
        System.out.println("Enter the paragraph:");
        String paragraph = sc.nextLine();
        System.out.println("Alphabetic Ascending Order: " + extractUniqueWords(paragraph, Order.ALPHABETIC_ASCENDING));
        System.out.println("Alphabetic Descending Order: " + extractUniqueWords(paragraph , Order.ALPHABETIC_DESCENDING));
        System.out.println("Length then Alphabetic Ascending Order: " + extractUniqueWords(paragraph ,Order.LENGTH_THEN_ALPHABETIC_ASCENDING));
        System.out.println("Input Order: " + extractUniqueWords(paragraph , Order.INPUT_ORDER));
    }
}
```

Output:


"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\lib\idea_rt.jar=61504:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\b
Enter the paragraph:
Welcome to our company wipro
Alphabetic Ascending Order: [company, our, to, welcome, wipro]
Alphabetic Descending Order: [wipro, welcome, to, our, company]
Length then Alphabetic Ascending Order: [to, our, wipro, company, welcome]
Input Order: [welcome, to, our, company, wipro]
Process finished with exit code 0