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BE-AIML

Practical 3 precision and recall

CODE:

```
import java.util.*; public class  
PrecisionRecall {    public static void  
main(String[] args) {  
    // Sample input  
    Set<String> answerSet = new HashSet<>(Arrays.asList("doc1", "doc2", "doc4"));  
    Set<String> relevantSet = new HashSet<>(Arrays.asList("doc2", "doc3", "doc4"));  
    // Compute intersection  
    Set<String> intersection = new HashSet<>(answerSet);  
    intersection.retainAll(relevantSet);  
    // Precision  
    double precision = (double) intersection.size() / answerSet.size();  
    // Recall      double recall = (double) intersection.size() /  
    relevantSet.size();  
    System.out.println("Answer set A: " + answerSet);  
    System.out.println("Relevant set R1: " + relevantSet);  
    System.out.println("Retrieved relevant documents (A ∩ R1): " + intersection);  
    System.out.printf("Precision: %.2f\n", precision);  
    System.out.printf("Recall: %.2f\n", recall);  
}  
}
```

OUTPUT :

```
// Sample input  
  
Set<String> answerSet = new HashSet<>(Arrays.asList("doc1", "doc2", "doc4"));  
  
Set<String> relevantSet = new HashSet<>(Arrays.asList("doc2", "doc3", "doc4"));
```

```
Microsoft Windows [Version 10.0.19045.6396]  
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C:\Users\admin>cd C:\Users\admin\Desktop\pranali gadade  
  
C:\Users\admin\Desktop\pranali gadade>javac PrecisionRecall.java  
  
C:\Users\admin\Desktop\pranali gadade>java PrecisionRecall  
Answer set A: [doc4, doc2, doc1]  
Relevant set R1: [doc4, doc3, doc2]  
Retrieved relevant documents (A ∩ R1): [doc4, doc2]  
Precision: 0.67  
Recall: 0.67  
  
C:\Users\admin\Desktop\pranali gadade>
```