**BIBD Practical 6 – (AMSA)**

**CODE:**

public class BIBDPractical6 {

public static int findCharCount(String stream, char XE, int random, int n)

{

int countOccurance = 0;

for(int i = random; i<n; i++)

{

if(stream.charAt(i)==XE)

{

countOccurance++;

}

}

return countOccurance;

}

public static int estimateValue(int XV1, int n)

{

int ExpValue;

ExpValue = n\*(2\*XV1-1);

return ExpValue;

}

public static void main(String args[])

{

int n=15;

String stream="abcbdacdabdcaab";

int random1=3, random2=8, random3=13;

char XE1,XE2,XE3;

int XV1,XV2,XV3;

int ExpValXE1,ExpValXE2,ExpValXE3;

int apprSecondMomentValue;

XE1 = stream.charAt(random1-1);

XE2 = stream.charAt(random2-1);

XE3 = stream.charAt(random3-1);

XV1 = findCharCount(stream, XE1, random1-1, n);

XV2 = findCharCount(stream, XE2, random2-1, n);

XV3 = findCharCount(stream, XE3, random3-1, n);

System.out.println(XE1 + "=" + XV1 + " " + XE2 + "=" + XV2 + " " + XE3 + "=" + XV3);

ExpValXE1 = estimateValue(XV1, n);

ExpValXE2 = estimateValue(XV2, n);

ExpValXE3 = estimateValue(XV3, n);

System.out.println("Expected value for " + XV1 + " is: " + ExpValXE1);

System.out.println("Expected value for " + XV2 + " is: " + ExpValXE2);

System.out.println("Expected value for " + XV3 + " is: " + ExpValXE3);

apprSecondMomentValue=(ExpValXE1 + ExpValXE2 + ExpValXE3)/3;

System.out.println("Approximate Second moment value using Alon-Matias-Szegedy is :: "+apprSecondMomentValue);

}

} // end of class BIBDPractical6

**OUTPUT:**

