3.Write a Java Program to find the largest and smallest word in a string.

Description:  
ALGORITHM  
STEP 1: START  
STEP 2: DEFINE String string="Hardships often prepare ordinary people for an extraordinary destiny"  
STEP 3: DEFINE word = " ", small = " ", large = " ".  
STEP 4: Make object of String[] words.  
STEP 5: SET length =0  
STEP 6: string = string + " "  
STEP 7: SET i=0. REPEAT STEP 8 to 9 STEP UNTIL i  
STEP 8: IF(string.charAt(i) != ' ') then  
word =word + string.charAt(i)  
else  
word[length]=word  
length =length + 1  
word = " "  
STEP 9: i=i+1  
STEP 10: small = large =words[0]  
STEP 11: SET k = 0. REPEAT STEP 12 to STEP 14 UNTIL k  
STEP 12: IF(small.length() > words[k].length())  
then  
small = words[k]  
STEP 13: IF(large.length() < words[k].length())  
then  
large = words[k]  
STEP 14: k = k + 1  
STEP 15: PRINT small  
STEP 16: PRINT large  
STEP 17: END

public class Main {

public static void main(String[] args){

String string = "Hardships often prepare ordinary people for an extraordinary destiny";

String word = "", small = "", large="";

String[] words = new String[100];

int length = 0;

string = string + " ";

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

if(string.charAt(i) != ' '){

word = word + string.charAt(i);

}

else{

words[length] = word;

length++;

word = "";

}

}

small = large = words[0];

for(int k = 0; k < length; k++){

if(small.length() > words[k].length())

small = words[k];

if(large.length() < words[k].length())

large = words[k];

}

System.out.println("Smallest word: " + small);

System.out.println("Largest word: " + large);

} }

**Output:**

