**E-commerce Platform Search Function Superset ID: 6385612**

import java.util.\*;

class Product{

int productId;

String productName;

String category;

public Product(int id,String name,String cat){

this.productId=id;

this.productName=name;

this.category=cat;

}

public static Product Linearsearch(Product[] arr,String name){

for(Product p:arr){

if(p.productName.equalsIgnoreCase(name)){

return p;

}

}

return null;

}

public static Product Binarysearch(Product[] arr,String name){

int left=0;

int right=arr.length-1;

while(left<=right){

int mid=(left+right)/2;

int c=arr[mid].productName.compareToIgnoreCase(name);

if(c==0){

return arr[mid];

}

else if(c<0){

left=mid+1;

}

else{

right=mid-1;

}

}

return null;

}

public static void main(String[] args){

Product[] arr={new Product(1,"Camera","electronic"),

new Product(2,"Mobile","electronic"),

new Product(3,"Shirt","cloths"),};

Arrays.sort(arr,Comparator.comparing(p->p.productName.toLowerCase()));

Product result=Product.Binarysearch(arr,"Mobile");

System.out.println(result!=null?result.productName+" Found":"Not Found");

Product res=Product.Binarysearch(arr,"Camera");

System.out.println(res!=null?res.productName+" Found":"Not Found");

Product r=Product.Binarysearch(arr,"Fruits");

System.out.println(r!=null?r.productName+" Found":"Not Found");

}

}

**OUTPUT:**

