**package** assigmet;

**import** java.util.ArrayList;

**import** java.util.List;

**import** java.util.Optional;

**import** java.util.stream.Collectors;

**public** **class** Streams {

**public** **static** **void** main(String[] args) {

ArrayList<String> cityList = **new** ArrayList<String>();

cityList.add("Hyerabad");

cityList.add("banglore");

cityList.add("chennai");

cityList.add("mumbai");

cityList.add("delhi");

cityList.add("chicago");

List<String> uppercase = cityList.stream().map(a -> a.toUpperCase()).collect(Collectors.*toList*());

System.***out***.println(uppercase);

List<String> length = cityList.stream().filter(a -> a.length()>6).collect(Collectors.*toList*());

System.***out***.println(length);

List<String> startswith = cityList.stream().filter(a -> a.startsWith("c")).collect(Collectors.*toList*());

System.***out***.println(startswith);

List<String> contain = cityList.stream().filter(a -> a.contains("ai")).collect(Collectors.*toList*());

System.***out***.println(contain);

List<String> append = cityList.stream().map(a -> a.concat("metro")).collect(Collectors.*toList*());

System.***out***.println(append);

List<String> sortedList = cityList.stream().sorted().collect(Collectors.*toList*());

System.***out***.println(sortedList);

**long** count = cityList.stream().filter(a -> a.startsWith("c")).count();

System.***out***.println(count);

Optional<String> first = cityList.stream().filter(a -> a.equals("banglore")).findFirst();

System.***out***.println(first);

}

}

**package** assigmet;

**import** java.util.List;

**import** java.util.function.Consumer;

**import** assigmet.Person;

**import** assigmet.PersonRepository;

**public** **class** cosumer {

**static** Consumer<Person> *c1* = (per) -> System.***out***.println(per);

**static** Consumer<Person> *c2* = (per) -> System.***out***.println(per.getGender().toUpperCase());

**static** Consumer<Person> *c3* = (per) -> { System.***out***.print("Salary with new year bonus:");

System.***out***.println(per.getSalary()+1000);};

**static** List<Person> *personlist* = PersonRepository.*getAllPersons*();

**public** **static** **void** main(String[] args) {

*printWithCondition*();

}

**public** **static** **void** printWithCondition() {

*personlist*.forEach(per -> { *c1*.andThen(*c2*).accept(per);

*c3*.accept(per);

});

}

}

**package** assigmet;

**public** **class** Address {

String block, city, state, country;

**int** pincode;

**public** Address(String block, String city, String state, String country, **int** pincode) {

**super**();

**this**.block = block;

**this**.city = city;

**this**.state = state;

**this**.country = country;

**this**.pincode = pincode;

}

**public** String getBlock() {

**return** block;

}

**public** **void** setBlock(String block) {

**this**.block = block;

}

**public** String getCity() {

**return** city;

}

**public** **void** setCity(String city) {

**this**.city = city;

}

**public** String getState() {

**return** state;

}

**public** **void** setState(String state) {

**this**.state = state;

}

**public** String getCountry() {

**return** country;

}

**public** **void** setCountry(String country) {

**this**.country = country;

}

**public** **int** getPincode() {

**return** pincode;

}

**public** **void** setPincode(**int** pincode) {

**this**.pincode = pincode;

}

@Override

**public** String toString() {

**return** "Address [block=" + block + ", city=" + city + ", state=" + state + ", country=" + country + ", pincode="

+ pincode + "]";

}

}

**package** assigmet;

**import** java.util.ArrayList;

**import** java.util.List;

**import** java.util.Optional;

**public** **class** Person {

**private** String name;

**private** **int** height;

**private** **double** salary;

**private** String gender;

**private** **int** kids;

List<String> hobbies = **new** ArrayList<>();

Optional<Address> address;

**public** Person() {

**super**();

}

**public** Person(String name, **int** height, **double** salary, String gender, **int** kids, List<String> hobbies) {

**super**();

**this**.name = name;

**this**.height = height;

**this**.salary = salary;

**this**.gender = gender;

**this**.kids = kids;

**this**.hobbies = hobbies;

}

**public** Optional<Address> getAddress() {

**return** address;

}

**public** **void** setAddress(Optional<Address> address) {

**this**.address = address;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** **int** getHeight() {

**return** height;

}

**public** **void** setHeight(**int** height) {

**this**.height = height;

}

**public** **double** getSalary() {

**return** salary;

}

**public** **void** setSalary(**double** salary) {

**this**.salary = salary;

}

**public** String getGender() {

**return** gender;

}

**public** **void** setGender(String gender) {

**this**.gender = gender;

}

**public** **int** getKids() {

**return** kids;

}

**public** **void** setKids(**int** kids) {

**this**.kids = kids;

}

**public** List<String> getHobbies() {

**return** hobbies;

}

**public** **void** setHobbies(List<String> hobbies) {

**this**.hobbies = hobbies;

}

@Override

**public** String toString() {

**return** "Person [name=" + name + ", height=" + height + ", salary=" + salary + ", gender=" + gender + ", kids="

+ kids + ", hobbies=" + hobbies + "]";

}

}

**package** assigmet;

**import** java.util.Arrays;

**import** java.util.List;

**import** java.util.Optional;

**public** **class** PersonRepository {

**public** **static** List<Person> getAllPersons() {

Person p1 = **new** Person("John", 165, 2000, "Male", 2, Arrays.*asList*("Cricket", "Swimming", "Tennis"));

Person p2 = **new** Person("Angel", 158, 5000, "Female", 2, Arrays.*asList*("Driving", "Music", "Football"));

Person p3 = **new** Person("Dean", 140, 5700, "Male", 2, Arrays.*asList*("Cricket", "Driving", "Tennis"));

Person p4 = **new** Person("Nancy", 130, 4900, "Female", 2, Arrays.*asList*("Cricket", "Swimming", "Tennis"));

Person p5 = **new** Person("Harper", 125, 9000, "Female", 2, Arrays.*asList*("Football", "Swimming", "Tennis"));

Person p6 = **new** Person("Alan", 110, 9500, "Male", 2, Arrays.*asList*("Cricket", "Swimming", "Tennis"));

Person p7 = **new** Person("Campell", 165, 1548, "Male", 1, Arrays.*asList*("Swimming", "Tennis"));

**return** Arrays.*asList*(p1, p2, p3, p4, p5, p6, p7);

}

**public** **static** Person getPerson() {

**return** **new** Person("John", 165, 2000, "Male", 2, Arrays.*asList*("Cricket", "Swimming", "Tennis"));

}

**public** **static** Optional<Person> getPersonOptional() {

Person per = *getPerson*();

per.setAddress(Optional.*of*(**new** Address("7 th Block", "Ashburn", "Virginia", "USA", 20047)));

**return** Optional.*of*(per);

}

}