1. Our example with two classes: Person and Passport. In this scenario, a Person has a Passport, but a Passport does not need to have a reference back to the Person.
2. Diagram:

A diagram of a diagram

Description automatically generated with medium confidence

1. Implementation:
   1. Person class

package problem3;

import java.util.Date;

public class Person {

private String firstName;

private String lastName;

private Date birthDate;

private String birthPlace;

private String ssn;

private Gender gender;

private Passport passport;

public Person(String firstName, String lastName, Date birthDate, String birthPlace, String ssn, Gender gender) {

this.firstName = firstName;

this.lastName = lastName;

this.birthDate = birthDate;

this.birthPlace = birthPlace;

this.ssn = ssn;

this.gender = gender;

}

public String getFirstName() {

return firstName;

}

public String getLastName() {

return lastName;

}

public Date getBirthDate() {

return birthDate;

}

public String getBirthPlace() {

return birthPlace;

}

public String getSSN() {

return ssn;

}

public Gender getGender() {

return gender;

}

public void addPassport(String passportNumber, PassportType type, String code, Date issuedDate, Date expiryDate,

String issuingAuthority) {

if (passport == null)

passport = new Passport(passportNumber, type, code, issuedDate, expiryDate, issuingAuthority);

}

public Passport getPassport() {

return passport;

}

}

* 1. Passport class

package problem3;

import java.util.Date;

public class Passport {

private String passportNumber;

private PassportType type;

private String code;

private Date issuedDate;

private Date expiryDate;

private String issuingAuthority;

public Passport(String passportNumber, PassportType type, String code, Date issuedDate, Date expiryDate,

String issuingAuthority) {

this.passportNumber = passportNumber;

this.type = type;

this.code = code;

this.issuedDate = issuedDate;

this.expiryDate = expiryDate;

this.issuingAuthority = issuingAuthority;

}

public String getPassportNumber() {

return passportNumber;

}

public PassportType getPassportType() {

return type;

}

public String getCode() {

return code;

}

public Date getIssuedDate() {

return issuedDate;

}

public Date getExpiryDate() {

return expiryDate;

}

public String getIssuingAuthority() {

return issuingAuthority;

}

}

1. Main method:

package problem3;

import java.text.ParseException;

import java.text.SimpleDateFormat;

import java.util.Date;

public class Solution {

public static void main(String[] args) {

try {

Date birthDate = new SimpleDateFormat("dd/MM/yyyy").parse("29/01/1990");

Date issuedDate = new SimpleDateFormat("dd/MM/yyyy").parse("23/07/2023");

Date expiryDate = new SimpleDateFormat("dd/MM/yyyy").parse("23/07/2033");

Person person1 = new Person("Dustin", "Nguyen", birthDate, "Ho Chi Minh city", "ssn12345", Gender.Male);

person1.addPassport("no12345", PassportType.Regular, "VN123", issuedDate, expiryDate,

"Immigration Department");

Passport pp = person1.getPassport();

System.out.println("Passport number: " + pp.getPassportNumber());

} catch (ParseException e) {

e.printStackTrace();

System.out.println(e.getMessage());

}

}

}