

SharkNet

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1 GooglePlusProfile

A Google plus profile(g+ profile) is like a specified profile or an application based on the profile implementation. What a profile is and how it is used, is well explained in a previous chapter "Profile". The content which could be stored in this profile is very similar to a real g+ profile. One of the main reasons for this application is to make a/an wrapper/interface for g+ profile information. If there is a stream from Google which provides data it is possible to easily make an g+ profile object and fill it with data from the stream. At the end our object looks like the raw data of a g+ profile from Google.

1.1 GooglePlusProfileFactory

These g+ profile factory is a manager of g+ profiles. It provides functions to create g+ profiles, to get g+ profiles and to remove them. E.g. `GooglePlusProfile createGooglePlusProfile (String name, String profileURL)` throws `SharkKBException`; is a function to create a g+ profile. Parameter name is just the name of the profile and parameter profileURL is the location or the link where the profile is located or where it can be found. The implementation of this function is based on functionalities of "ProfileFactory". To create a `GooglePlusProfileFactory` a `ProfileFactory` is needed and to create a `ProfileFactory` a `SharkKB` is needed. At the end all information or all g+ profiles are stored in the `SharkKB`. `GooglePlusProfile`

`createGooglePlusProfile` (String name, String profileURL) throws `SharkKBException`; creates peers with a name and URL as semantic identifiers. These peers are used to be parameters of a `createProfile(PeerSemanticTag)` function of the `ProfileFactory`. All functions of `GooglePlusProfileFactory` are like "createGooglePlusProfile(...)" because they use different functionalities of "ProfileFactory". That's why these application is based on the profile/profileFactory implementation. The `GooglePlusProfileFactory` is based on `ProfileFactory` and the `GooglePlusProfile` is based on `Profile`.

1.1.1 Create, get and remove a GooglePlusProfile

```
public class AliceGooglePlusProfile {
    //Creating an empty in memory SharkKB
    private SharkKB kb = new InMemoSharkKB();

    //Creating a ProfileFactory object
    private ProfileFactory profileFactory;

    //Creating a GooglePlusProfileFactory object
    private GooglePlusProfileFactory googlePlusProfileFactory;

    //Initialize ProfileFactory with SharkKB and
    //GooglePlusProfileFactory with ProfileFactory
    public AliceGooglePlusProfile() throws SharkKBException {
        profileFactory = new ProfileFactoryImpl(kb);
        googlePlusProfileFactory =
            new GooglePlusProfileFactoryImpl(profileFactory);
    }

    public void createAliceGooglePlusProfile()
        throws SharkKBException {
        googlePlusProfileFactory.createGooglePlusProfile
            ("Alice", "http://www.sharksystem.net/alice.html");
    }

    public GooglePlusProfile getAliceGooglePlusProfile()
        throws SharkKBException {
        return googlePlusProfileFactory.getGooglePlusProfile

```

```

        ("Alice", "http://www.sharksystem.net/alice.html");
    }

    public void removeAliceGooglePlusProfile()
        throws SharkKBException {
        googlePlusProfileFactory.removeGooglePlusProfile
            ("Alice", "http://www.sharksystem.net/alice.html");
    }

```

How does the implementation of `AliceGooglePlusProfile` work? First defining three private members: an empty `SharkKB`, a not initialized `ProfileFactory` and a not initialized `GooglePlusProfileFactory`. Building a constructor that initializes `profileFactory` with the empty `SharkKB` and then initializes `googlePlusProfileFactory` with `profileFactory` it also throws a `SharkKBException`. Declaring three functions to create, get and remove Alice g+ profile.

- `createAliceGooglePlusProfile()`: `googlePlusProfileFactory.removeGooglePlusProfile("Alice", "http://www.sharksystem.net/alice.html");`
- `getAliceGooglePlusProfile()`: `googlePlusProfileFactory.getGooglePlusProfile("Alice", "http://www.sharksystem.net/alice.html");`
- `removeAliceGooglePlusProfile()`: `googlePlusProfileFactory.removeGooglePlusProfile("Alice", "http://www.sharksystem.net/alice.html");`

It is important to know the signature of a g+ profile. Signature is first the name of the profile e.g. "Alice" and second the profile URL e.g. "http://www.sharksystem.net/alice.html". These profile URL is like a semantic identifier of a `PeerSemanticTag`. It shows the link or place where the profile is located. Knowing the signature is important because it is needed to create a profile, to find or get it and to remove it.

1.1.2 Using and testing `AliceGooglePlusProfile`

```

public class AliceGooglePlusProfileTest {

    private SharkKB kb = new InMemoSharkKB();
    private ProfileFactory profileFactory;
    private GooglePlusProfileFactory googlePlusProfileFactory;

```

```

public AliceGooglePlusProfileTest() throws SharkKBException {
    profileFactory = new ProfileFactoryImpl(kb);
    googlePlusProfileFactory =
        new GooglePlusProfileFactoryImpl(profileFactory);
}

@Test
public void testCompleteAliceProfile() throws SharkKBException{
    //Create and complete Alice g+ Profile
    GooglePlusProfile myGooglePlusProfile =
        googlePlusProfileFactory.createGooglePlusProfile
            ("Alice", "http://www.sharksystem.net/alice.html");
    myGooglePlusProfile.setFirstName("Alllllice");
    myGooglePlusProfile.setLastName("Alpha");
    myGooglePlusProfile.setNickname("Ali");
    myGooglePlusProfile.setFirstName("Alice");
    myGooglePlusProfile.setTagline
        ("Hi Im Alice I like to solve complex
        problems and writing good code.");
    myGooglePlusProfile.setIntroduction
        ("My story begins a long time ago,
        I was 14 when I created my first little program." +
        "At this moment I was so interested in programing
        it even becomes one of my greatest hobbies.");
    myGooglePlusProfile.setBraggingRights
        ("I wrote my own linux kernel.");
    myGooglePlusProfile.setOccupation
        ("I do my bachelors degree of applied science
        at the HTW subject: applied computing");
    myGooglePlusProfile.setSkills
        ("Java, Scala, C++, C, PHP, HTML, CSS");
    myGooglePlusProfile.addEmployment
        ("HTW", "Programmer", 2012, 2015,
        true, "I write Scala and Java tests.");
    myGooglePlusProfile.addEducation("University of Applied Sciences",
        "Applied Computing", 2012, 2015, true,
        "I learned a lot about programming and software engineering.");
}

```

```

myGooglePlusProfile.addPlace("Berlin", true);
myGooglePlusProfile.addPlace("London", false);
myGooglePlusProfile.setGender("Female");
myGooglePlusProfile.setLookingforFriends(true);
myGooglePlusProfile.setLookingforDating(true);
myGooglePlusProfile.setLookingForNetworking(true);
myGooglePlusProfile.setLookingForRelationship(false);
myGooglePlusProfile.setBirthday("03.12.1992");
myGooglePlusProfile.setRelationship("Im in a relation with Bob.");
myGooglePlusProfile.addOtherName("Jizy");
myGooglePlusProfile.addHomeContact("Mobile", "0151-2357823");
myGooglePlusProfile.addWorkContact("Phone", "030-28665432");
myGooglePlusProfile.addWorkContact("Address", "Rathenau Str. 42");
myGooglePlusProfile.addWorkContact("Fax", "030-28665433");
myGooglePlusProfile.addOtherProfiles
    ("BobsProfile", "https://google/googlePlus/Profiles/Bob");
myGooglePlusProfile.addContributorTo
    ("SharkNet", "http://www.sharksystem.net/apps.html");
myGooglePlusProfile.addLinks
    ("My favorite website", "http://google.com");

//Reading the Profile
assertEquals("Alice", myGooglePlusProfile.getFirstName());
assertEquals("Alpha", myGooglePlusProfile.getLastName());
assertEquals("Ali", myGooglePlusProfile.getNickname());
assertEquals("Hi Im Alice I like to solve complex problems and
    writing good code.", myGooglePlusProfile.getTagline());
assertEquals("My story begins a long time ago,
    I was 14 when I created my first little program." +
    "At this moment I was so interested in programing
    it even becomes one of my greatest hobbies.",
    myGooglePlusProfile.getIntroduction());
assertEquals("I wrote my own linux kernel.",
    myGooglePlusProfile.getBraggingRights());
assertEquals("I do my bachelors degree of applied science
    at the HTW subject: applied computing",
    myGooglePlusProfile.getOccupation());
assertEquals("Java, Scala, C++, C, PHP, HTML, CSS",

```

```

        myGooglePlusProfile.getSkills());
assertEquals("HTW", myGooglePlusProfile.getEmployerName("0"));
assertEquals("Programmer", myGooglePlusProfile.getJobTitle("0"));
assertEquals(2012, myGooglePlusProfile.getStartOfEmployment("0"));
assertEquals(2015, myGooglePlusProfile.getEndOfEmployment("0"));
assertEquals(true, myGooglePlusProfile.getIsEmploymentCurrent("0"));
assertEquals("I write Scala and Java tests.",
        myGooglePlusProfile.getJobDescription("0"));
assertEquals("University of Applied Sciences",
        myGooglePlusProfile.getSchoolName("0"));
assertEquals("Applied Computing", myGooglePlusProfile.getMajor("0"));
assertEquals(2012, myGooglePlusProfile.getStartOfEducation("0"));
assertEquals(2015, myGooglePlusProfile.getEndOfEducation("0"));
assertEquals(true, myGooglePlusProfile.getIsEducationCurrent("0"));
assertEquals("I learned a lot about programming and
        software engineering.",
        myGooglePlusProfile.getCourseDescription("0"));
assertEquals("Berlin", myGooglePlusProfile.getCity("0"));
assertEquals(true, myGooglePlusProfile.getIsPlaceCurrent("0"));
assertEquals("London", myGooglePlusProfile.getCity("1"));
assertEquals(false, myGooglePlusProfile.getIsPlaceCurrent("1"));
assertEquals("Female", myGooglePlusProfile.getGender());
assertEquals(true, myGooglePlusProfile.getLookingForFriends());
assertEquals(true, myGooglePlusProfile.getLookingForDating());
assertEquals(true, myGooglePlusProfile.getLookingForNetworking());
assertEquals(false, myGooglePlusProfile.getLookingForRelationship());
assertEquals("03.12.1992", myGooglePlusProfile.getBirthDay());
assertEquals("Im in a relation with Bob.",
        myGooglePlusProfile.getRelationship());
assertEquals("Jizy", myGooglePlusProfile.getOtherName("0"));
assertTrue(myGooglePlusProfile.getHomeContactType(0).equals("Mobile")
        && myGooglePlusProfile.getHomeContactInfo(0)
        .equals("0151-2357823"));
assertTrue(myGooglePlusProfile.getWorkContactType(0).equals("Phone")
        && myGooglePlusProfile.getWorkContactInfo(0)
        .equals("030-28665432"));
assertTrue(myGooglePlusProfile.getWorkContactType(1).equals("Address")
        && myGooglePlusProfile.getWorkContactInfo(1)

```

```

        .equals("Rathenau Str. 42"));
assertTrue(myGooglePlusProfile.getWorkContactType(2).equals("Fax")
    && myGooglePlusProfile.getWorkContactInfo(2)
        .equals("030-28665433"));
assertTrue(myGooglePlusProfile.getOtherProfilesLabel(0)
    .equals("BobsProfile")
    && myGooglePlusProfile.getOtherProfilesUrl(0)
        .equals("https://google/googlePlus/Profiles/Bob"));
assertTrue(myGooglePlusProfile.getContributorsLabel(0)
    .equals("SharkNet")
    && myGooglePlusProfile.getContributorsUrl(0)
        .equals("http://www.sharksystem.net/apps.html"));
assertTrue(myGooglePlusProfile.getLinkLabel(0)
    .equals("My favorite website")
    && myGooglePlusProfile.getLinkUrl(0)
        .equals("http://google.com"));

    }

}

```

AliceGooglePlusProfileTest is a test class which uses every getter and setter function a GooglePlusProfile provides. In this special example every content option is set once or more often. There is a difference between setters and adding functions. A function that "sets" content can only save one content but not multiple contents at the same time. Functions with "add" like `addEmployment(...)` can add multiple contents at the same time. If setter functions are used twice they simply will overwrite the last content. But content could be arbitrary complex. Just store a large string or a text as string and set it as content. Every stored parameter or variable has its own getter. Some getters need an identifying number as Integer and other getters need an identifying number as String. These are the getters from adding functions, because "adding" functions can add multiple contents it is needed to identify these contents with an index or an identifier. To access e.g. the job title of an employment use function `getJobTitle("0")` the parameter specifies which employment is needed.