

Assignment 2 – S.O.L.I.D. Principles

Due Date: Friday, June 15th / 2018 at 24:00 (midnight)

How to submit:

- Like assignment 1, create a folder in your private repo named “Assignment2” and commit and push your discussion files and code.
- Do not RAR or ZIP your files, just have them in a folder in your private repo.

Code for this assignment is in the LectureSamples repo on GitHub:

<https://github.com/DalhousieUniversityCSCI5308/LectureSamples>

Requirements:

All code you write for this assignment must be written in Java to make the TA’s job easier. You do not need to write unit tests for code in this assignment.

Question 1: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the **Employer class** violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question1/Employer.java

LectureSamples/SOLIDAssignment/Question1/HourlyWorker.java

LectureSamples/SOLIDAssignment/Question1/SalaryWorker.java

Question 2: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the following code violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question2/ILibraryItem.java

LectureSamples/SOLIDAssignment/Question2/Book.java

LectureSamples/SOLIDAssignment/Question2/DVD.java

Question 3: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the **ProfitReport class** violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question3/ProfitReport.java

LectureSamples/SOLIDAssignment/Question3/EmailSender.java

Question 4: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the following code violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question4/BankAccount.java

LectureSamples/SOLIDAssignment/Question4/USDollarBankAccount.java

Question 5: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the following code violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question5/Canada.java

LectureSamples/SOLIDAssignment/Question5/CountryGDPReport.java

LectureSamples/SOLIDAssignment/Question5/Mexico.java

Question 6: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the PiggyBank class violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question6/PiggyBank.java

Question 7: (Answer with discussion and code)

1. Which S.O.L.I.D. principle does the following code violate?
2. Why does the code violate the principle?
3. Write code that fixes the violation.

Code:

LectureSamples/SOLIDAssignment/Question7/Insect.java

LectureSamples/SOLIDAssignment/Question7/AquaticInsect.java

LectureSamples/SOLIDAssignment/Question7/FlyingInsect.java