Design approach

The first step of the design process was to assess the scope of the application in order to decide what the structure would be. Beginning without doing this step could potentially lead to many errors down the road when the scope ends up being too large or small for the design structure that I've proceeded with.

After assessing the scope I decided the functionality could all be achieved in a single class instead of creating multiple classes each responsible for small operations. For example it wouldn't make sense to create a Person class that only contains the first and last name variables.

After this I listed all the possible class level variables that I would require as well as a list of methods that would be needed to perform the various operations. Using this information I created a class diagram that would be the basis of my application design.

ERD

Payslip

- firstName:String
- lastName:String
- annualSalary:int
- superRate:double
- startDate:Date
- endDate:Date
- grossIncome:int
- netIncome:int
- incomeTax:int
- superAmount:int
- taxRate:int
- + requestUserInput():ArrayList<>
- + generatePayslip()
- + calculatePayPeriod(Date startDate)
- + calculateTax()
- + calculateIncome()
- + calculateSuper()

The attributes/methods in red were later heavily modified or removed from the final program altogether as the design became more refined.

Assumptions

The date is presented by the user in the [dd/mm/yyyy] format.

The end date of the payment period is exactly 1 month after the start date provided by the user. The super rate is always given as a decimal by the user.

Unit tests

INPUT

First Name	Last Name	Annual Salary	Super rate	Payment period
				start date
Monica	Tan	60050	0.09	01/03/2021
Brend	Tulu	120000	0.10	01/03/3033

EXPECTED OUTPUT

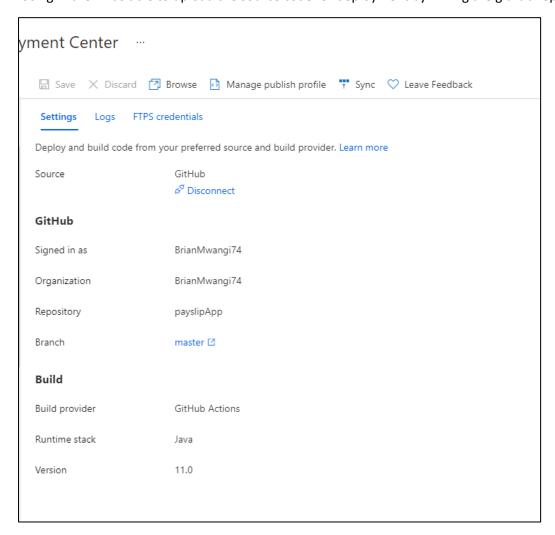
Name	Payment period	Gross income	Tax deducted	Net income	Super amount
Monica Tan	01/03/2021 to	5004	922	4082	450
Brend Tulu	01/04/2021 01/03/3033	10000	2669	7331	1000
	to 01/04/3033				

OUTPUT

Name	Payment period	Gross income	Tax deducted	Net income	Super amount
Monica Tan	Mon Mar 01 00:00:00 UTC 2021 TO Thu Apr 01 00:00:00 UTC 2021	5004	922	4082	450
Brend Tulu	Fri Mar 01 00:00:00 UTC 3033 TO Mon Apr 01 00:00:00 UTC 3033	10000	2669	7331	1000

CI/CD

Using Azure I was able to upload the source code for deployment by linking the github repository.



However I was unable to create a new deployment for CI/CD.

