Golden master technique

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Hi.
I am Milda

Wix Engineering Locations

Ukraine
Kiev
Dnipro

Israel
Tel-Aviv
Be’er Sheva

Lithuania
Vilnius
What do **YOU** know about legacy?
  e match {
  case el if el.size == 1 && thisDayWorkStarts == todayInMillis && thisDayWorkEnds == tomorrow => {
    testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), "-", "-", "-", "-"), (0L, 0L))
  }

  case el if el.size == 1 && el.head._2 < filterMiddle && lastDayWorkEnds <= todayInMillis =>
    val workedFor = Application.employeelTimeCount(companyId, empNr, thisDayWorkStarts, thisDayWorkEnds, lastDayworkStarts, el.head._2, el.last._2, startYesterday(empNr), "mornStart", day, month, companyCountF/testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), "-", "-", "-", "-"), (0L, 0L))
  case el if el.size == 1 && el.head._2 > dayMiddle && thisDayWorkStarts > dayMiddle =>
    val workedFor = Application.employeelTimeCount(companyId, empNr, thisDayWorkStarts, thisDayWorkEnds, lastDayworkStarts, el.head._2, el.last._2, startYesterday(empNr), "mornEnd", day, month, companyCountF/testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), "-", "-", "-", "-"), (0L, 0L))
  case el if el.size == 1 && el.head._2 < dayMiddle && lastDayWorkEnds >= todayInMillis =>
    val workedFor = Application.employeelTimeCount(companyId, empNr, thisDayWorkStarts, thisDayWorkEnds, lastDayworkStarts, el.head._2, el.last._2, startYesterday(empNr), "evEnd", day, month, companyCountF/testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), "-", "-", "-", "-"), (0L, 0L))

  case el if el.size > 1 && el.head._2 < filterMiddle && lastDayWorkEnds <= todayInMillis && el.last._2 > filterMiddle =>{
    val workedFor = Application.employeelTimeCount(companyId, empNr, thisDayWorkStarts, thisDayWorkEnds, lastDayworkStarts, el.head._2, el.last._2, startYesterday(empNr), "mornStartEvEnd", day, month, comp/testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), testingType((el.last._1, el.last._3), convertMillisecondsToDate((el.last._2), "-", "-", "-", "-"), (0L, 0L))

  case el if el.size > 1 && el.head._2 < filterMiddle && lastDayWorkEnds > todayInMillis && el.last._2 > dayMiddle =>{
    val workedFor = Application.employeelTimeCount(companyId, empNr, thisDayWorkStarts, thisDayWorkEnds, lastDayworkStarts, el.head._2, el.last._2, startYesterday(empNr), "mornEndEvStart", day, month, comp/testingType((el.last._1, el.last._3), convertMillisecondsToDate((el.last._2), testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), "-", "-", "-", "-"), (0L, 0L))}

  case el if el.size > 1 => {
    val workedFor = Application.employeelTimeCount(companyId, empNr, thisDayWorkStarts, thisDayWorkEnds, lastDayworkStarts, el.head._2, el.last._2, startYesterday(empNr), "mornStartEvEnd", day, month, comp/testingType((el.head._1, el.head._3), convertMillisecondsToDate((el.head._2), testingType((el.last._1, el.last._3), convertMillisecondsToDate((el.last._2), "-", "-", "-", "-"), (0L, 0L))}

  case _ => {
    val workedFor = (0L, 0L)
    ("-", ",-", ",-", ",-") workedFor
  }

  })
AGENDA

Golden master technique
Live coding
Real life examples
Legacy code is simply code without tests.

Michael Feathers
Legacy code is **valuable** code that we feel **afraid** to change.

J. B. Rainsberger
DAFUQ
AM I
READING
?!
#1 Edit and Pray

#2 Cover and Modify
Golden Master
How Golden Master Works

#1 Identify inputs and outputs of the system
#2 Run the system with different inputs
#3 Capture outputs
#4 Refactor
#5 Run with same inputs again
#6 Compare
"A seam is a place where you can alter behaviour in your program, without editing in that place."

Michael Feathers
Making a Seam
Small but dangerous change
Some ideas for Seams

- Logging
- Extract to dependencies
- Extend and override
Let’s try it!

I also like to live dangerously
Let’s try it!

Recap

1. Generated the inputs
2. Found the Seam
3. Captured the outputs
Keep in mind...

- We might not cover all cases
- We might miss some side effects
- Test is easily breakable
Keep Golden Master Safe

Run separately from tests!
Commit!
Real life examples
The *Chicken Chow Mein Nepali Style*. Need I say more about the noodle heaven I just sprung myself into. I have ordered Chicken noodles but I can take this colorful rendition any day.

To start off, the chicken is grilled unto where the edges are crispy and the meat is yet juicy, which is actually lovable to infinity. But it just gets interesting from there, as there are multitude of flavors awaiting to end my meal on a high note. I am just in love with this dish which is spicy yet quite amazingly tasty. Be it the freshness from the peas, sweetness from the carrots, the marriage of spices which depicts in the color adorned by the noodles or the crisp and refreshing cabbage, I am not sure. You decide yourself!

**Taste: 9/10**

If you happen to be in Chicago, you might as well give a visit to the Devon Avenue in the evening just to get into the aura of a well-lit street packed with restaurants and shopping stores and most definitely, to Nepal House.

**Details**
Nepal House  
2601 West Devon Ave  
Chicago, IL 60659  
[773] 681-0200

**Overall**
- Taste: 9/10
- Ambience: 8/10
- Service: 8/10
- Value for Money: 8/10
So...

Golden master is the first test

Make testable
→ Input → output

Seam is a place in the system, allowing to change the behaviour for testing
Before you go

Start small
Don’t continue to write legacy
Don’t leave legacy after you (TDD)
Thank You

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