

Babysitter Kata

Background

This kata simulates a babysitter working and getting paid for one night. The rules are pretty straight forward.

The babysitter:

- starts no earlier than 5:00PM
- leaves no later than 4:00AM
- gets paid \$12/hour from start-time to bedtime
- gets paid \$8/hour from bedtime to midnight
- gets paid \$16/hour from midnight to end of job
- gets paid for full hours (no fractional hours)

Feature

*As a babysitter

In order to get paid for 1 night of work
 I want to calculate my nightly charge
*

SCREEN I LANDING PAGE

TOTAL # of FAMILIES SERVED
YTD monthly EARNINGS

SCREEN II ADD JOB
YTD EARNINGS # of Jobs PAID
Amount of Jobs PAID

CAN ADJUST FOR EMERGENCY
PICK A FAMILY
NORMAL START TIME
END END TIME
CAN ROLLS OVER SO USE TICKS OR TIMESPAN
CHARGE
(ADD A FAMILY)
DEL A FAMILY
(RESTORE FAMILY)
→ REMOVES FROM SELECTION

STANDARD RATE
START TIME >= 5pm
END TIME <= 4am

SPECIAL RULES
SUN & M-Th
REGULAR FRI & SAT
BEDTIME → 12 MIDNIGHT
MIDNIGHT → END-OF-JOB (when RELIEVED BUT BEFORE 4AM) \$16
NIGHT RULES
COULD INCLUDE School

REGULAR
FRI & SAT
RULES

LIKE CANNOT WORK AFTER MIDNIGHT
OVERRIDABLE
LIKE HOLIDAY & PARTIN SCHOOL

REDUCED RATE
START → BEDTIME?
BEDTIME → 12 MIDNIGHT
4:01A - 4:59P

MIDNIGHT → END-OF-JOB (when RELIEVED BUT BEFORE 4AM) \$16

ADD,
DEL,
RESTORE,
REMOVE

FAMILY
KIDS

NAME
AGE
NOTES

* PAYMENT RULES
#J Amount
S-BED TIMEFRAME
BED-MID &
MID-4A 16

Jobs

Family Name
BEDTIME
START DATE
START-TIME

ADD,
DEL,
RESTORE,
REMOVE

FAMILY
KIDS

NAME
AGE
NOTES

* PAYMENT RULES
#J Amount
S-BED TIMEFRAME
BED-MID &
MID-4A 16

Job
TOTAL
YTD
monthly

END-Time
PAID?
PAY BY
Check Account?
CASH ONLY?
PARTIAL PAY

ADD,
DEL,
RESTORE,
REMOVE

FAMILY
KIDS

NAME
AGE
NOTES

* PAYMENT RULES
#J Amount
S-BED TIMEFRAME
BED-MID &
MID-4A 16

Paid in Full Hours
< 1/2 hour EAT
≥ 1/2 hour PAID

ADD,
DEL,
RESTORE,
REMOVE

FAMILY
KIDS

NAME
AGE
NOTES

* PAYMENT RULES
#J Amount
S-BED TIMEFRAME
BED-MID &
MID-4A 16

Jobs
Not Paid

Paid in Full Hours
< 1/2 hour EAT
≥ 1/2 hour PAID

* TRANSACTIONS
(PAID)

FAMILY NAME
JOB DATE
TOTAL HOURS
START TIME
END TIME

CALENDAR
OF
AVAILABLE
DAYS

RATES PER CHILD
1ST & ADDITIONAL

No SCHEDULED Jobs ON SAME DAY

1 Kata
 2
 3
 4 Pages
 5 Starting/Landing
 6 Add Job
 7 Change Job ✓
 8 Search Jobs by datetime of now "Q"
 9 Search Jobs by start date "A"
 10 Search Jobs Not Paid "A", "Q"
 11 Search Jobs Paid "A", "Q"
 12 Search Jobs by family name "A"

13 Add Family ✓
 14 Change Family ✓
 15 Search Family by Family Name "A", "Q"
 16 Search Family by Kid Name "A", "Q"
 17 Search Family by Birthday "A"
 18 Search Family by Cash "Q"
 19 Search Family by Check "Q"
 20 Search Family by Home Phone "A", "Q"
 21 Search Family by Mobile Phone "A", "Q"
 22 Search Family by EMail "A", "Q"
 23 Add Kid ✓
 24 Change Kid ✓
 25 View Transactions ADD/CHANGE/DEL
 26 Search Transaction Family Name "A", "Q"
 27 Search Transaction by Date between a start and end date "A"
 28 Search Transaction by ALL (Desc Date) "A", "Q"

Payment Rules

Data Tables

Job

Id
 Family Id
 Start Date
 Start Time
 End Time
 Kids
 Paid

Continue to Reformat until each of the three Billing Rates
 ARE objectified for use as DECORATORS OR
 USE OF STRATEGY PATTERN by way of BUILDER PATT.

determine if
 TRANSACTION IS
 CREATED

Family

Id
 Name
 Home Phone
 Contact Phone
 Contact EMail
 Bed Time
 Half Hour Pay

FOR WHICH
 FAMILY

Future Discriminator
 FOR BILLING

Kid

Id
 Name
 Bed Time
 Age/Birthday
 Note

PER KID

* COULD even REFACTOR RATES PER AGE OF CHILD

Transaction

Id
 Family Name
 Job Date
 Total Hours
 Start Time
 End Time
 Amount

Billing
 TRANSACTION
 ONLY FOR PAID ITEMS

Rule

Id
 Standard Rate
 Reduced Rate
 Special Rate

Not imp yet
 still DECIDING
 HOW TO REFACTOR
 BILLING!

Job Info
 Hour Info
 Money Info
 Quick Search
 Advanced Search
 User Data Input
 Partial - Search

FIRST APP SCAPFLED BY C.F.
 ADD/CHANGED DEL to be RESEARCHED
 LATER

PARTIAL SEARCH PAGE

AFTER DETERMINING THE
 BILLING USE FACTORY /
 BUILDER, or COMPOSITE
 TO CREATE THEM

SEE NOTE ON PAYMENT
 RULES

68
 69 System
 70 Minimum Start Time
 71 Maximum End Time
 72 Default Standard Billing Rate
 73 Default Evening Billing Rate
 74 Default Late Night Billing Rate
 75
 76 Features/Methods
 77 Calculate nightly charge (based on start/end times for the three rates that
 78 apply. Future feature to deal with half hours. >=.5 charge whole) *maybe to the*
 79 *midnight!*
 80 Total jobs not paid yet
 81 Total amount of jobs not paid yet
 82 Total families served
 83 Total YTD families served
 84 Total monthly families served
 85 Total money collected
 86 Total YTD money collected
 87 Total monthly money collected
 88 Add/Remove Job
 89 Add/Remove Family (removing family just removes family from dropdown selections)
 90 Add/Remove Kid
 91 Add/Remove Payment Rules
 92 Reset system defaults (payment rules for amounts; Minimum start time (5pm);
 93 Maximum end/stop time(4am))
 94
 95 Requirements
 96 Start time cannot be before 5 pm (cannot be between 4:01am to 4:59pm, cannot be
 97 greater then 'Maximum End Time' and less then 'Minimum Start Time')
 98 End time cannot be after 4 am (cannot be between 4:01am to 4:59pm, cannot be
 99 greater then 'Maximum End Time' and less then 'Minimum Start Time')
 100 between start time, 5 pm at the earliest and bedtime the rate charged is \$12
 101 for every whole hour
 102 between bedtime and midnight the rate charged is \$8 for every whole hour
 103 between midnight and the end of the job, 4am at the latest, the rate charged is
 104 \$16 for every whole hour
 105
 106 Possible Enhancements *ALL REMOVALS REFACTORED TO MARK AS DELETED*
 107 *TO ALLOW RESTORE, ARCHIVE & AUDIT*
 108 Remove Job
 109 Restore/Recover Job
 110 Remove Family
 111 Restore/Recover Family
 112 Remove Kid
 113 Restore/Recover Kid
 114 Purge transaction older than date
 115 Reset/Clear a family (leaves transaction)
 116 Reset/Clear all families (leaves transaction)
 117 Reset/Clear all Data storage
 118
 119 Calendar of available working days
 120 Turn off midnight to 4 am availability (school day scheduling) (overridable)
 121 Allow real time adjustment to rates
 122 Have rate per child. Individual rate
 123 Full hour pay for half hour or more work. Not paid for less then half hour.
 124 Not allow double booking. Booking more than one job for same time but different
 125 families
 126 Not allow booking jobs with over lapping times
 127
 128 Develop mobile app to review schedule and book a new job

MAKE Singleton
 FOR INJECTION
 INTO BILLING METHOD

```
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24 View Transactions
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28 Payment Rules
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30 Data Tables
31 Job
32   Id
33   Family Id
34   Start Date
35   Start Time
36   End Time
37   Kids
38   Paid
39 Family
40   Id
41   Name
42   Home Phone
43   Contact Phone
44   Contact EMail
45   Bed Time
46   Half Hour Pay
47   Cash
48   Kids
49 Kid
50   Id
51   Name
52   Bed Time
53   Age/Birthday
54   Note
55 Transaction
56   Id
57   Family Name
58   Job Date
59   Total Hours
60   Start Time
61   End Time
62   Amount
63 Rule
64   Id
65   Standard Rate
66   Reduced Rate
67   Special Rate
```

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