Java Full Stack — Short term training program.

Day 1: 23/6/25

Morning Session

    Class
    object
    Reference
  abstract
    Interface
    inheritance
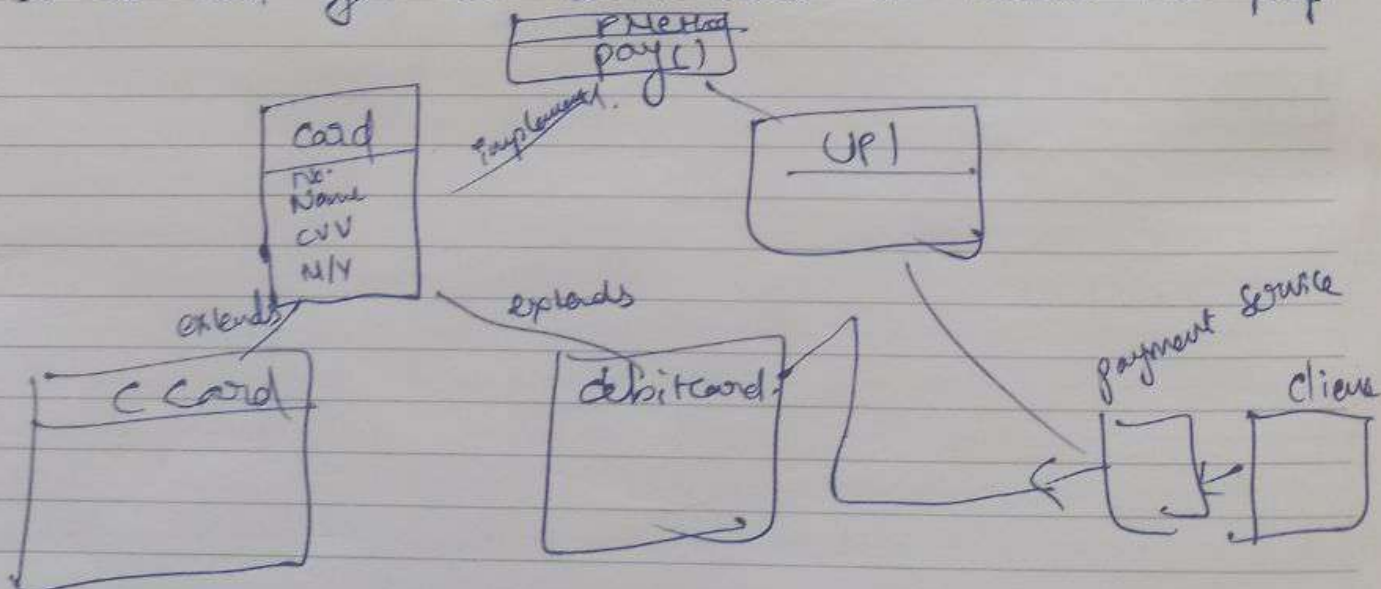
String S1; — reference

String S1[ ] = new String( );

      ↓ object

ex:- payment methods in any app   procedure

  like   credit card
      debit card
      upi

what are the req you need   name, AC No, CVV, M&Y
for CC & DC
so we can you use card class to inherit the prop

Afternoon Session :   Exception handling

Error   Vs   Exception.

Checked   unchecked.

It's Categories.

Day 2 :   24/6/25   Morning Session.

✓ program for : Unchecked ExceptionDemo . java.

⇒ Arithmetic Exception.
⇒ Input Mismatch Exception
⇒ ArrayIndexOutOf Bound
⇒ Number Format Exception

✓ Checked ExceptionDemo . java   (compiler force to handle

⇒ File Not found Exception
⇒ IOException
⇒ Interrupted Exception.

✓   User defined Exceptions   use throw , throws
                                    keyword.

Usage of all keywords try , catch , throw , throws , fina

SwimmerAdmission . java
NotAllowedToSwim Exception . java
SAClient . java

MAY						2015
Wk	M	T	W	T	F	S	S
18					1	2	3
19	4	5	6	7	8	9	10
20	11	12	13	14	15	16	17
21	18	19	20	21	22	23	24
22	25	26	27	28	29	30	31

JUNE						2015
Wk	M	T	W	T	F	S	S
23	1	2	3	4	5	6	7
24	8	9	10	11	12	13	14
25	15	16	17	18	19	20	21
26	22	23	24	25	26	27	28
27	29	30					

Afternoon Session: legacy
                          Collections. class
                          miscellaneous classes.

ArrayList   Hash Set   Hash Map   Iterators
LinkedList   Tree Set   Tree Map   ListIterator
                 Linked Hash Set Linked Hash Map

Vector Exl. java.

Day 3 : 25/06/25

Morning Session.

Student DAL

void   add Student (Student s)   data
                                                 access
          Student get Study ById (String id)   layer.

ArrayList < Stdnt> get All Students ( );

void.   removeStudent (String id);

void.   updateStudent (string id, Stnt m);

Intellij

New
    ↳ project
         ↳   name (you give)

         (search for java)

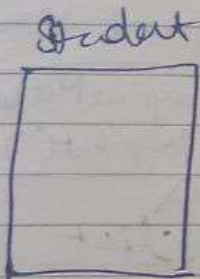   ↳ New → package
         → Day3_session
                → StudentManage

Click on Interface

    ↳ Student DAL.

Student `{ id = ↓ ", name = ↓ ", marks = }
      + id +   + . +

Afternoon Session:

Student	Student-DAL	Student DAL Impl	Student DAL Dao
□	□	□	□
class	Interface	class	class
variables	⇓	Implementor	Client
constructors,	only method	Jay	Side
getters & setters	signature.	details.	program.
to String			
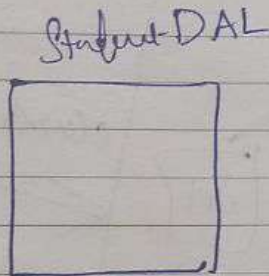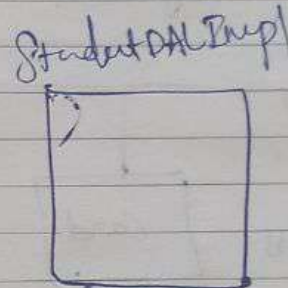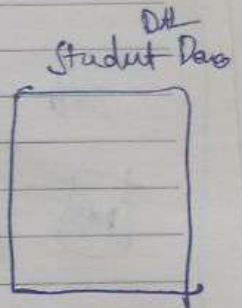
code in Intellij

2015 JUNE   2015

	T	W	T	F	S	S		WE	M	T	W	T	F	S	S
					1	2	3		23	1	2	3	4	5	6	7
	5	6	7	8	9	10		24	8	9	10	11	12	13	14
	12	13	14	15	16	17		25	15	16	17	18	19	20	21
	19	20	21	22	23	24		26	22	23	24	25	26	27	28
	26	27	28	29	30	31		27	29	30					

Day 4: Morning Session

private   for data members
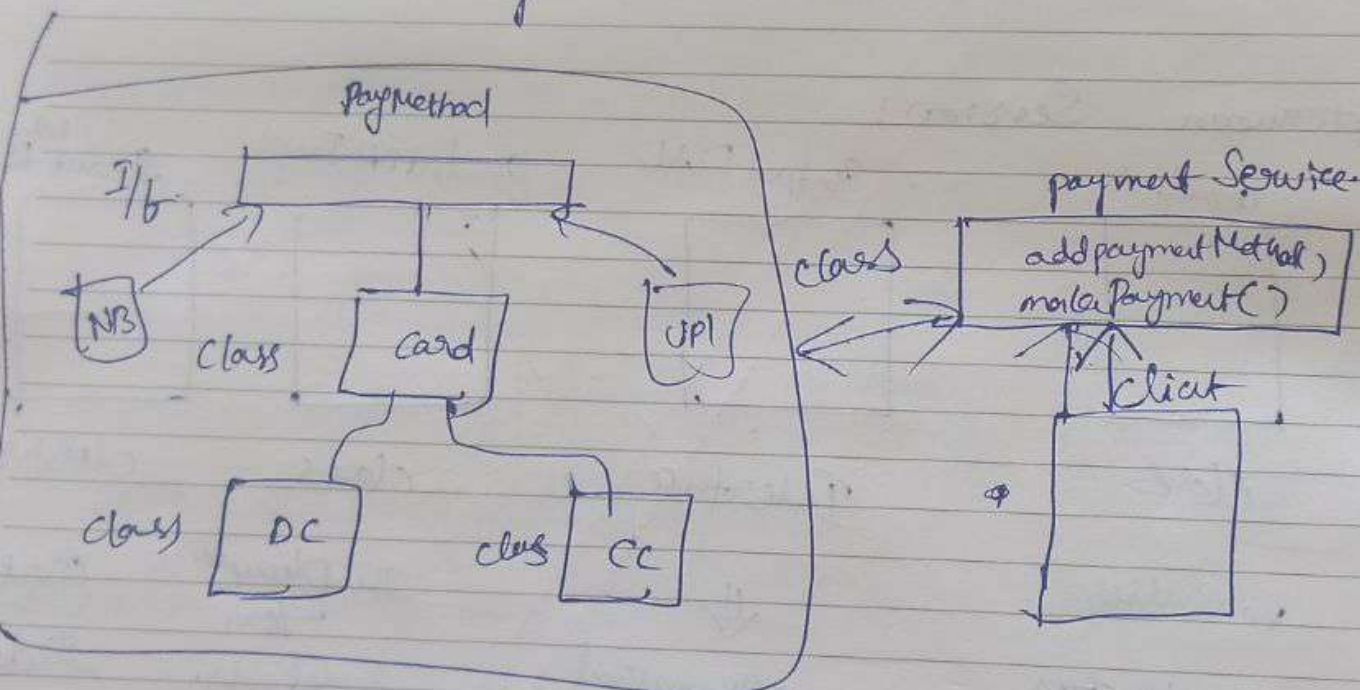public   for methods

for conventional purpose it's not a rule -

To avoid naming conflict in the constructor you can use this keyword.

Afternoon Session:

Collections — List
              Arraylist

add   printing 4 types

ALEX2.java

for / iterator / for each / streams

Day 5 :   Morning   Session   Strategy7.

Collections   →   Set , HashSet, LinkedHashSet, TreeSet

for string   ex:-   SetEx3.java   SetEx4.java

         StreamIntermediate-functions.java   (8 functions
                                                        implementations)

         Map , HashMap, LinkedHashMap, TreeMap.

                                                      unique, natural
               MapEx5.java   order

         of duplicate key is there it will be overrode.

Afternoon Session :   IOStreams.

1 byte return   0 - 255   ASCII range. (FIS, FOS)
2 byte character   0 - 65535   unicode range (FR, FW)

         FIS , FOS , BIS , BOS , FR , FW , BR , BW

         Serialization (Object-OutputStream, Object InputStream)

JUNE   2015   JULY   2015
M T W T F S S   W M T W T F S S
1 2 3 4 5 6 7   27   1 2 3 4 5
8 9 10 11 12 13 14   28 6 7 8 9 10 11 12
15 16 17 18 19 20 21   29 13 14 15 16 17 18 19
22 23 24 25 26 27 28   30 20 21 22 23 24 25 26
29 30   31 27 28 29 30 31

03 WEDNESDAY

Day 6:   Morning   Session

web server   web browser   Application

                 Google Chrome   Gmail
                                         youtube
  Tomcat   M. Firefox   Google Search Engine
                                         Amazon
                 M. Edge.   fliphart

                                    Front End

Backend

database   mobile

                                   image
daily   price
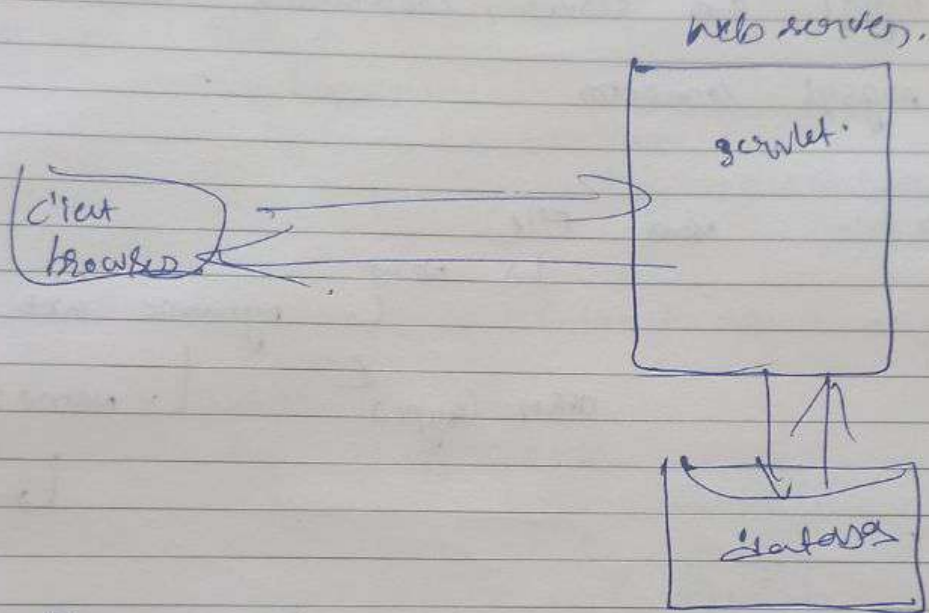MySQL
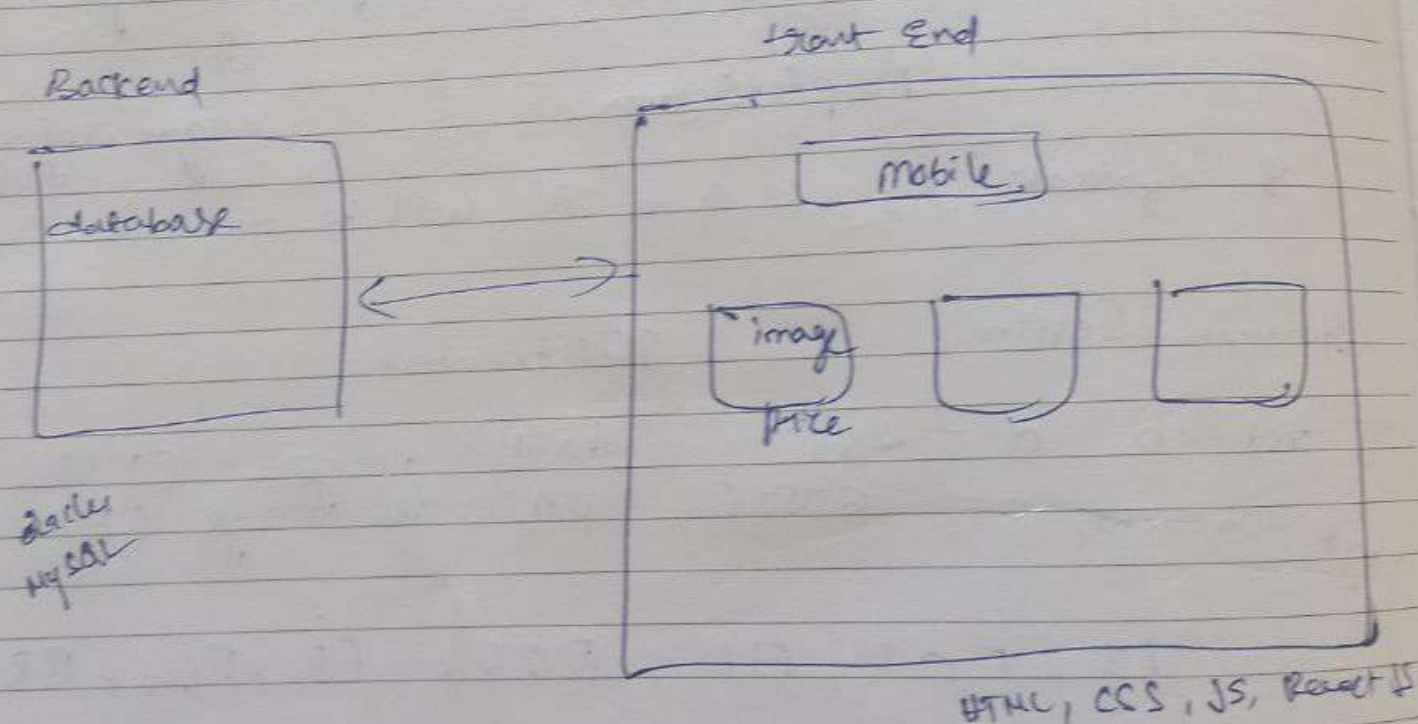
HTML, CSS, JS, React JS

1. The browser sends a http req to web server
2. The server process its req
3. The server sends back an Http response
4. The browser displays (eg: HTML page) to the
   result to you

1·3   static   vs Dynamic   web page
1·4   web servers   and   servlets containers.

Java servlet is a java program that runs
inside a   servlet container.

web server.

servlet.

client
browser

database

Afternoon Session:-

MySQL installation,   SQL overview
and   practice commands   in workbench.

JUNE						2015		JULY						2015
M	T	W	T	F	S	S		Wk	M	T	W	T	F	S	S
1	2	3	4	5	6	7		27			1	2	3	4	5
8	9	10	11	12	13	14		28	6	7	8	9	10	11	12
15	16	17	18	19	20	21		29	13	14	15	16	17	18	19
22	23	24	25	26	27	28		30	20	21	22	23	24	25	26
29	30							31	27	28	29	30	31		

30/6/25   Day 7 :   Softwares installing.

Eclipse Enterprise   Edition

Apache tomcat   server   (Just Extract it)

mysql 8.0 server, coorkbench,   Shell)

mgsql connector.

ee / EP :-   new File
                          ↳ New
                                  ↳ Dynamic web project
other (type) ←   ↳ Name: hello_1

                                          ↳ runtime.

                                              ↳ select

                                                  apach
→ browser.   tomcat
      ↳ search for server   ←————   (req)

6.) JFS Softwares ettp \ apach-tomcat 7.0 ??-Window.

→ Installed jre's
            select   standard VM
                      ↳ finsish
JRE
    ↳ JR-17 → finish   ↳

Next
↳ next
↳→

Generate web.xml
↳ finish

⇒ click on Hello1
↳ New
↳ servlet
↳ class Name:
Hello_Servlet

(don't touch any thing)

↳ Next
↳ uncheck   ☑ do Get
doPost
↳ finish.

⇒ In our program Instead of protected you can
write public
for doGet method.

hello1
↳ run as
↳ run on server
↳ select localhost
tomcat 7.0
👁

JUNE   2015   JULY
Wk M T W T F S S   Wk M T W T F S S
23   1 2 3 4 5 6 7   27   1 2 3 4 5
24   8 9 10 11 12 13 14   28   6 7 8 9 10 11 12
25 15 16 17 18 19 20 21   29 13 14 15 16 17 18 19
26 22 23 24 25 26 27 28   30 20 21 22 23 24 25 26
27 29 30   31 27 28 29 30 31

http://localhost:8080/hel1b1/
HelloServlet

↳ Next
↳ html
↳ finish

08 MONDAY

In console   red button   to stop the server.

Click on terminate.

Day 8:   Morning session.

Create Registration table

mysql workbench   APP   front end
                   RegisterServlet   HTML

Reg   DBConnection   form

✓   ✓   ✓

Project → clean   ① jar

→ Properties

↳ java build path → library
                    ↳ class path →

Add library ←   ↳ Add External
                                    jars

Add   JRE Sys lib.   ↳ mysql-
           ↳ WORK JRE   connect

                                    ↳ jar

deployment Assembly

$\hookrightarrow$ 1. /src/main/java

2. (webapp

$\hookrightarrow$ Add

$\hookrightarrow$ Jar. 'mysql-conn

$\hookrightarrow$ Apply & close

Afternoon Session:

Implementation.

- Lifecycle servlet methods $\rightarrow$

$\rightarrow$ init $\longrightarrow$

$\rightarrow$ service use

$\rightarrow$ destroy $\longrightarrow$ close
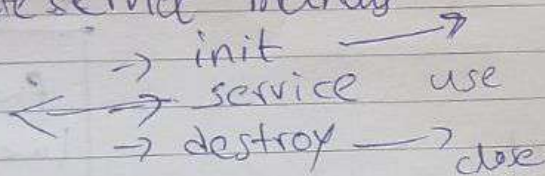
Ctrl + Shift + O $\Leftarrow$ importing packages automatically

import java. sql. *;

" java. io. *;

" javax. servlet. *;

" javax. servlet. http. *;

" javax. servlet. annotation. *;

(Todolist done)

Day 9: Lab external exams.

Day 10: Morning session.

multi forms registration servlet   mfr8 -3

① new
   ↳ Dynamic web project
      ↳ give name like mfr8_3

         check apach 7.0 & there or not

      ↳ Next
         ↳ check web.xml file
            ↳ finish.

② mfr8_3
   ↳ New
      ↳ html
         ↳ First.html

Run as Server ⇒ o/p.

If you want to change the port go to servers in op

console change it 8080 to 8081.

second.html

Third.html

open
↳ web.xml

Add   <welcom_file> first.html </welcome_file>
                              my

because after submission of first form it

goes to second
                    ↳ it goes to third.

                              willgoalltoth
/ →   /, local host 8080 - server homepage
. →   reffers → main project . (like project name).

throws → throw is used to reporting

try/catch → Exception handing .

Execute query for select

Execute update for insert , delete, update.

JUNE   2015   JULY   2015
WK M T W T F S S   WK M T W T F S S
27 1 2 3 4 5 6 7 27   1 2 3 4 5
28 8 9 10 11 12 13 14 28 6 7 8 9 10 11 12
29 15 16 17 18 19 20 21 29 13 14 15 16 17 18 19
30 22 23 24 25 26 27 28 30 20 21 22 23 24 25 26
27 29 30   31 27 28 29 30 31

Day 11

hibernate - release - 5.6.5.Final → ↓ → lib → required (16 Jar file)

required — 16
optional — 7
↳ 20 Jar files

Eclipse IDE   total — 36 jar files.

Window
↳ preferences
↳
Java
↳ buildpath
↳
✓
✓ User libraries
↳ New
↳ Hib_lib
don't   ↳ OK
check.

Hib_lib
↳   Add External jars
↳ hibernate
↳ lib

(17)
Jar   myglconnector jar.

APRIL						2015	MAY						2015
Wk	M	T	W	T	F	S	S	Wk	M	T	W	T	F	S	S
14			1	2	3	4	5	18					1	2	3
15	6	7	8	9	10	11	12	19	4	5	6	7	8	9	10
16	13	14	15	16	17	18	19	20	11	12	13	14	15	16	17
17	20	21	22	23	24	25	26	27	18	19	20	21	22	23	24
18	27	28	29	30				22	25	26	27	28	29	30	31

eple

New ──→ project
        ↳ Java per
           ↳ Hib - 1
              ↳ Next
                 ↳ Library
                    ↳ class path
                      ↳ user library
                       ↳ Hib_lib

don't Create   ↳ finish
       ↳ open perspective

Hib - 1
     ↳ New
        ↳ class   (remove package name & term
                                any dummy)
           ↳ Dept   14 Sunday
              ↳ finish

dept . java

emp . java   (like wise

JUNE   2015   JULY   2015

Wk	M	T	W	T	F	S	S
23	1	2	3	4	5	6	7
24	8	9	10	11	12	13	14
25	15	16	17	18	19	20	21
26	22	23	24	25	26	27	28
27	29	30					

Wk	M	T	W	T	F	S	S
27			1	2	3	4	5
28	6	7	8	9	10	11	12
29	13	14	15	16	17	18	19
30	20	21	22	23	24	25	26
31	27	28	29	30	31		

Please remove Emplist selection & Emplist

Emp [____]   dept [____]

Right click
        ↳ generate
               ↳ super class constructor   ✓
                    Arg   ''   ✓

did
droin
loc

                    getters & setters   ✓
                    hashcode & equals   uncheck this d/t thing
                    toString   ''   ''   ''   ''

⟹ src folder
          ↳ new
               ↳ other
                    ↳ xml
                        ↳ Dept.hbm.xml

Check at once
        ↳ Don't give column names for relation mappings

⟱

    <one-to-many> & <many-to-one>

→ hibernate.cfg.xml

    check → driver class
         → url
         → username → password
         → dialect

    org.hibernate.dialect.MySQL8Dialect.

How we will write beans

no retrook — Constructor
all "
pk "
changed "

table name in the database   class name in the bean same

columns   in the database   thse columns are declared variables in the
                                      class

                                      variables are private.

                                      each variable can contain seter and getter
                                      private setter getter methods

                             in every bean 3 methods you must overrided.
                                      equals -> hashcode -> tostring.

natural sortable collection objection --> Set
                                            ↓
                                            Hashset --> unique unorderd
                                            ↓
                                            Linked hashset.

                                      class we get natural sorting ability.

                                                given long

ORM -> is the declarative Programing -   ORM follows 7 methods.
  JDBC ->   Programatic programing.   Inset
                                            save
                                            update
                                            delete
                                            get

      object - Relational mapping
      object - object relational mapping.

JUNE 2015   JULY 2015

WK M T W T F S S   WK M T W T F S S
   1 2 3 4 5 6 7   27   1 2 3 4 5
   8 9 10 11 12 13 14 28 6 7 8 9 10 11 12
   15 16 17 18 19 20 21 29 13 14 15 16 17 18 19
   22 23 24 25 26 27 28 30 20 21 22 23 24 25 26
   29 30   31 27 28 29 30 31