MODEL

ETF_MODEL +

```
note
   description: "A default business model."
   author: "Jackie Wang"
   date: "$Date$"
   revision: "$Revision$"

class interface
   ETF_MODEL

create {ETF_MODEL_ACCESS}
   make

feature -- model operations

   abort

   canseenby (start_row: INTEGER_32; start_col: INTEGER_32; end_row: INTEGER_32; end_col: INTEGER_32; vision: INTEGER_32): BOOLEAN
         -- from current location of enemy to fighter of both vision

   change_armour_name (sel2: STRING_8)

   change_engine_name (sel3: STRING_8)

   change_tolprojdamage (i19: INTEGER_32)

   change_tolregene (i14: INTEGER_32)

   change_tolregenh (i13: INTEGER_32)

   change_tolvision (i16: INTEGER_32)

   change_weapon_name (sel1: STRING_8)

   collide_pass: BOOLEAN

   converttruefalse (b1: BOOLEAN; b2: BOOLEAN): TUPLE [csf: STRING_8; sbf: STRING_8]

   debug_mode

   default_update
         -- Perform update to the model state.

   enemy_spawn

   enemyatspawnproje (row4: INTEGER_32; col4: INTEGER_32): BOOLEAN

   enemyatspwanprojf (rowfinal2: INTEGER_32; colfinal2: INTEGER_32; number: INTEGER_32): BOOLEAN
         -- remove projf if enemy collided

   enemycollidefighter (row3: INTEGER_32; colstart3: INTEGER_32; colend3: INTEGER_32; number: INTEGER_32): BOOLEAN
         -- enemy move and collide fighter

   enemycollideprojf (row3: INTEGER_32; colstart3: INTEGER_32; colend3: INTEGER_32; damage: INTEGER_32; number: INTEGER_32): BOOLEAN

   enemyfightervisionupdate

   enemyput (efirstrow: INTEGER_32; espawncol: INTEGER_32; sign: STRING_8; id: INTEGER_32)
         -- first 2 spawn are at 1,c

   entire_grid: STRING_8
         -- create entire grid

   fighter_vision (fighterrow: INTEGER_32; fightercol: INTEGER_32)
         -- update ? not S

   fightercollideenemy (mrow2: INTEGER_32; mcol2: INTEGER_32)

   fightercollideproj (mrow: INTEGER_32; mcol: INTEGER_32)

   fire

   hasenemyin (enemystartrow: INTEGER_32; enemystartcol: INTEGER_32; enemyendrow: INTEGER_32; enemyendcol: INTEGER_32): BOOLEAN

   incvisionhealth (row6: INTEGER_32; col6: INTEGER_32; number: INTEGER_32)

   ingamesetup

   move (mrow: INTEGER_32; mcol: INTEGER_32; ls_flag: STRING_8)

   num_steps (start_row: INTEGER_32; start_col: INTEGER_32; end_row: INTEGER_32; end_col: INTEGER_32): INTEGER_32

   pass

   play_setup (row: INTEGER_32; column: INTEGER_32; g_threshold: INTEGER_32; f_threshold: INTEGER_32; c_threshold: INTEGER_32; i_threshold: INTEGER_32; p_threshold:
INTEGER_32)
         -- only for initial setup / intialisation first print in setup next

   premactions (prem: STRING_8)

   projatenemyspawn (row5: INTEGER_32; col5: INTEGER_32; number: INTEGER_32)

   projatspawnprojf (rowfinal: INTEGER_32; colfinal: INTEGER_32; number: INTEGER_32)

   projeatspawnproj (row3: INTEGER_32; col3: INTEGER_32; number: INTEGER_32): BOOLEAN
         --check if there proj at spawn

   projecollideproje (rowstart5: INTEGER_32; colstart5: INTEGER_32; colend5: INTEGER_32; number: INTEGER_32): BOOLEAN

   projecollideprojf (row3: INTEGER_32; colstart3: INTEGER_32; colend3: INTEGER_32; number: INTEGER_32): STRING_8

   projenemycollide (row1: INTEGER_32; colstart: INTEGER_32; colend: INTEGER_32): BOOLEAN
         -- check if any in between for horizontal moving projectiles

   projfcollideenemy (mrow2: INTEGER_32; mcol2: INTEGER_32; number: INTEGER_32): STRING_8

   projfcollideproje (row3: INTEGER_32; colstart3: INTEGER_32; colend3: INTEGER_32; id: INTEGER_32; damage: INTEGER_32; number: INTEGER_32): STRING_8

   projfcollideprojetemp (row3: INTEGER_32; colstart3: INTEGER_32; colend3: INTEGER_32; id: INTEGER_32; damage: INTEGER_32; number: INTEGER_32): STRING_8

   projfightercollide (row2: INTEGER_32; colstart2: INTEGER_32; colend2: INTEGER_32): BOOLEAN

   projfoutofboard (prow: INTEGER_32; pcol: INTEGER_32; inc_by: INTEGER_32; number: INTEGER_32): BOOLEAN

   remainenergyfunc (call: STRING_8): INTEGER_3
         -- check how much health is remaining
   special

   update_allproj (premup: STRING_8)
         -- move projectile

   update_fighterproj (premup: STRING_8)
         -- projloc.put not movlov.inc := 2*movlov.inc

   updateenemy (prem: STRING_8)

   verticlecollideprojf (rowstart: INTEGER_32; ls_col: INTEGER_32; rowend: INTEGER_32; ine: INTEGER_32)

feature -- queries

   out: STRING_8
         -- New string containing terse printable representation
         -- of current object

end -- class ETF_MODEL
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SCORE_BUCKET +

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class interface
   FEATUREHELPER

create
   make

feature

   container_size: INTEGER_32

   insert (f: SCORE_BUCKET)

   isfocus: BOOLEAN

   make (name: STRING_8)

   ornaments: LINKED_LIST [SCORE_BUCKET]

   remain_capacity: INTEGER_32

   times: INTEGER_32

   tolpoints: INTEGER_32

   val: INTEGER_32

end -- class SCORE_BUCKET
```