

**Tugas Besar Logika Komputasional – IF2121**  
**I Got Scammed By My Client And Have to Restart My**  
**Life As A Farmer**

**“A Farmer’s Life is Not That Bad, I Think”**



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## PENJELASAN COMMAND

## I. startGame

*Command* startGame digunakan untuk menampilkan main menu sebelum dimulainya permainan. Setelah *command* ini dijalankan, *command* ini tidak bisa diakses lagi.

[illegible]

## II. start

*Command* start digunakan untuk memilih *job* sebelum dimulainya permainan. *Command* ini baru bisa diakses setelah *command* startGame dimasukkan serta merupakan syarat untuk menjalankan *command-command* lainnya dalam program ini.

```
/* Contoh penggunaan command start. */
| ?- start.
Welcome to Harvest Star. Choose your job
1. Fisherman
2. Farmer
3. Rancher
> 1.
You choose Fisherman, let's start farming
You have to get 20000 golds in 50 days
Good Luck!
```

```
yes
/* Contoh penggunaan command start. */
| ?- start.
Welcome to Harvest Star. Choose your job
1. Fisherman
2. Farmer
3. Rancher
> 4.
Invalid input
yes
```

### III. exitGame

*Command* exitGame digunakan saat *command* start belum dijalankan. Fungsinya untuk keluar dari main menu dan mengembalikan state program ke sebelum dimasukkannya *command* startGame.

```
| ?- exitGame.

SEE YOU AGAIN!

yes
```

### IV. status

*Command* status digunakan untuk melihat status pemain yang meliputi job, level dan experience pemain, level dan experience farming, fishing, serta ranching pemain, gold, dan energy.

```
/* Contoh penggunaan command status. */
| ?- status.
Your status:
Job           : Fisherman
Level         : 2
Exp           : 10/600
Level farming : 1
Exp farming   : 0/100
Level fishing : 3
Exp fishing   : 10/300
Level ranching : 1
Exp ranching  : 0/100
Gold          : 1000
Energy        : 20/220
yes
```

## V. help

*Command* help digunakan untuk menampilkan daftar command yang ada dalam permainan. Tidak semua *command* yang ada dalam help dapat dijalankan pada suatu waktu karena ada banyak *command* yang memiliki syarat untuk dieksekusi.

```
/* Contoh penggunaan command help */
| ?- help.
1. status      : untuk menampilkan kondisi terkini
2. map         : untuk menampilkan peta
3. inventory   : untuk menyimpan barang dan equipments tidak terpakai
4. throwItem   : untuk membuang barang dan equipments tidak terpakai
5. quest       : untuk mendapatkan misi baru
6. a           : untuk bergerak 1 langkah ke barat
7. s           : untuk bergerak 1 langkah ke selatan
8. w           : untuk bergerak 1 langkah ke utara
9. d           : untuk bergerak 1 langkah ke timur
10. dig        : untuk menggali tile
11. plant      : untuk menanam seed
12. harvest    : untuk memanen tanaman
13. fish       : untuk mendapatkan ikan
14. ranch      : untuk melihat list hewan ternak beserta jumlahnya
15. market    : untuk masuk ke dalam market
16. buy        : untuk membeli barang
17. sell       : untuk menjual barang
18. exitShop   : untuk keluar dari market
19. house     : untuk masuk ke dalam house
20. sleep      : untuk tidur
21. writeDiary : untuk menulis diary
22. readDiary  : untuk membaca diary
23. exitHouse  : untuk keluar dari house
24. help      : untuk menampilkan segala bantuan
25. exit      : untuk mengakhiri petualangan

yes
```

## VI. map

*Command* map digunakan untuk menampilkan peta. Posisi pemain menjadi prioritas untuk ditampilkan sehingga posisi khusus apapun akan ditutupi huruf 'P' jika pemain berada pada posisi tersebut.

```
/* Contoh penggunaan command map. */
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#-----ooo-----#
```

```

#-----oo-----#
#PH---oo---M---#
#-----ooo-----#
#####

yes
| ?- d.
You moved west.
You have arrived at your house! Type "house." to access the house menu.

/* Simbol H tergantikan dengan P saat pemain berpindah ke posisi H */
yes
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#-----ooo-----#
#-----oo-----#
#-P---oo---M---#
#----ooo-----#
#####

(16 ms) yes

```

## VII. inventory

*Command* inventory digunakan untuk menampilkan barang yang dimiliki oleh pemain.

```

/*Contoh quest di bukan tempat pengambilan inventory. */
| ?- inventory.
[]***** Your inventory (22 / 100) *****[]

        - 2 carrot_seed
        - 2 corn_seed
        - 2 tomato_seed
        - 2 potato_seed
        - Level_1_of_shovel
        - Level_1_fishing_rod
        - 1 chicken
        - 1 sheep
        - 1 cow
        - 4 cupang
        - 5 lele

[]*****[]

yes

```

## VIII. throwItem

*Command* throwItem digunakan untuk membuang barang yang dimiliki oleh pemain. Inventory akan ditampilkan ke pemain dan pemain bisa memasukan nama dan jumlah barang yang akan dibuang.

```
/* Contoh penggunaan command throwItem. */
| ?- throwItem.
[]***** Your inventory (16 / 100) *****[]

        - 2 carrot_seed
        - 2 corn_seed
        - 2 tomato_seed
        - 2 potato_seed
        - Level_1_of_shovel
        - Level_1_fishing_rod
        - 3 chicken
        - 2 sheep
        - 1 cow

[]*****[]
What do you want to throw ?
> carrot_seed.
You have 2 carrot_seed.
How many do you want to throw ?
> 1.
You threw away 1 carrot_seed

yes

/* Di inventory carrot_seed berkurang sebanyak 1 akibat command
throwItem. */
| ?- inventory.
[]***** Your inventory (15 / 100) *****[]

        - 1 carrot_seed
        - 2 corn_seed
        - 2 tomato_seed
        - 2 potato_seed
        - Level_1_of_shovel
        - Level_1_fishing_rod
        - 3 chicken
        - 2 sheep
        - 1 cow

[]*****[]

yes
```

## IX. quest

Terdapat satu tile khusus untuk tempat pengambilan quest. Hanya ada satu quest yang aktif pada satu waktu. Pemain bisa mengambil quest berikutnya bila quest sebelumnya sudah selesai, banyaknya item yang harus dikumpulkan akan dirandom di tiap pengambilan quest. Sedangkan banyaknya poin yang akan diterima setelah menyelesaikan quest akan berbanding lurus dengan banyaknya item yang harus dikumpulkan di dalam satu quest.

```
/*Contoh quest di bukan tempat pengambilan quest.*/
| ?- quest.
There is no quest here!

Yes

/*Contoh quest ketika ada quest aktif lain*/
| ?- quest.
You have an on-going quest!

Yes

/*Contoh quest berhasil*/
| ?- quest.
You got a new quest!

You need to collect:
- 3 harvest item
- 4 fish
- 5 ranch item

yes
```

## X. Exploration Mechanism

Pemain dapat bergerak menjelajahi peta dengan *command* w, a, s, atau d. *Command-command* ini akan mengakibatkan pengurangan energi pemain sebanyak 2.

### a. w.

Pemain bergerak ke atas. Jika gerakan berhasil, posisi pemain akan berpindah satu *tile* ke atas dan akan ditampilkan pesan “You moved north”.

```
/*Contoh penggunaan command w.*/
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
```

```
#o-----#
#--R-----#
#-----o-----#
#---ooo-----#
#-----oo-----#
#PH---oo---M---#
#---ooo-----#
#####
```

```
yes
| ?- w.
You moved north.
```

```
yes
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#---ooo-----#
#P-----oo-----#
#-H---oo---M---#
#---ooo-----#
#####
```

b. a.

Pemain bergerak ke kiri. Jika gerakan berhasil, posisi pemain akan berpindah satu tile ke kiri dan akan ditampilkan pesan “You moved east”.

```
/*Contoh penggunaan command a.*/
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#---ooo-----#
#-----oo-----#
#-H-P-oo---M---#
#---ooo-----#
#####
```

```
yes
| ?- a.
You moved east.
```

```
yes
```



```
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#----ooo-----#
#-----oo-----#
#-HP--oo--M-----#
#----ooo-----#
#####
```

c. s.

Pemain bergerak ke bawah. Jika gerakan berhasil, posisi pemain akan berpindah satu tile ke bawah dan akan ditampilkan pesan “You moved south”.

```
/*Contoh penggunaan command s.*/
```

```
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#----ooo-----#
#-----oo-----#
#-HP--oo--M-----#
#----ooo-----#
#####
```

```
yes
| ?- s.
You moved south.
```

```
yes
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#----ooo-----#
#-----oo-----#
#-H--oo--M-----#
#--P-ooo-----#
#####
```

```
yes
```

d. d.

Pemain bergerak ke kanan. Jika gerakan berhasil, posisi pemain akan berpindah satu tile ke kanan dan akan ditampilkan pesan “You moved west”.

```
/*Contoh penggunaan command d.*/
```

```
| ?- map.
```

```
#####  
#ooo-----#  
#oooo-----#  
#oo-----Q-----#  
#o-----#  
#--R-----#  
#-----o-----#  
#-P--ooo-----#  
#-----oo-----#  
#-H---oo---M---#  
#-----ooo-----#  
#####
```

```
(31 ms) yes
```

```
| ?- d.
```

```
You moved west.
```

```
yes
```

```
| ?- map.
```

```
#####  
#ooo-----#  
#oooo-----#  
#oo-----Q-----#  
#o-----#  
#--R-----#  
#-----o-----#  
#-P--ooo-----#  
#-----oo-----#  
#-H---oo---M---#  
#-----ooo-----#  
#####
```

```
yes
```

Command-command gerakan tersebut dapat gagal memindahkan posisi pemain jika target gerakannya berada di luar peta atau merupakan tile air.

```
| ?- map.
```

```
#####  
#ooo-----#  
#oooo-----#  
#oo-----Q-----#  
#o-----#  
#--R-----#  
#-----o-----#
```

```

#----ooo-----#
#-----oo-----#
#-H---oo---M---#
#---Pooo-----#
#####

yes

/* Contoh penggunaan command gerakan jika target gerakannya tile air
*/
| ?- d.
You cannot move to a water tile!

no

/* Contoh penggunaan command gerakan jika target gerakannya di luar
peta */
| ?- s.
You cannot move out of the map!

no

```

Command gerakan akan memberikan pesan khusus bila hasil gerakan merupakan tile khusus yang meliputi house, tempat quest, ranch, marketplace, tanaman, atau berada di dekat air.

```

| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q-----#
#o-----#
#--R-----#
#-----o-----#
#---ooo-----#
#-----oo-----#
#-H---oo---M---#
#-P---ooo-----#
#####

(32 ms) yes

/* Contoh command gerakan ke tile yang bertipe House */
| ?- w.
You moved north.
You have arrived at your house! Type "house." to access the house
menu.

/* Dilakukan command gerakan beberapa kali hingga tercapai posisi di
bawah */
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----PQ-----#
#o-----#

```

```

#--R-----#
#-----o-----#
#-----ooo-----#
#-----oo-----#
#-H---oo---M---#
#----ooo-----#
#####

(16 ms) yes

/* Contoh command gerakan ke tile yang bertipe tempat quest */
| ?- d.
You moved west.
You have arrived at the quest centre! Type "quest." to get a quest.

yes

/* Dilakukan command gerakan beberapa kali hingga tercapai posisi di
bawah */
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo--P----Q----#
#o-----#
#--R-----#
#-----o-----#
#----ooo-----#
#-----oo-----#
#-H---oo---M---#
#----ooo-----#
#####

yes

/* Contoh command gerakan ke tile yang berada di dekat air */
| ?- w.
You moved north.
You are close to the waters! Type "fish." to start fishing.

yes

```

Command gerakan akan memberikan pesan terkait rendahnya energi jika energi berada di bawah 50. Pesan rendahnya energi juga akan ditampilkan pada saat command dig dan fish jika energi menjadi di bawah 50.

```

| ?- map.
#####
#ooo-----#
#oooo-----#
#oo-----Q----#
#o-----#
#--R-----#

```

```

#-----o-----#
#-----ooo-----#
#-----oo-----#
#-H---oo---M---#
#---Pooo-----#
#####

yes

/* Contoh penggunaan command gerakan jika target gerakannya tile air
*/
| ?- d.
You cannot move to a water tile!

no

/* Contoh penggunaan command gerakan jika target gerakannya di luar
peta */
| ?- s.
You cannot move out of the map!

no

```

## XI. Farming

Terdapat 3 *command* terkait farming yaitu dig, plant, dan harvest. Ketiga *command* tersebut akan mengurangi energi saat dieksekusi.

### a. Dig

Menggali tile dengan syarat bukan tile spesial. Akan menampilkan pesan error bila yang berusaha digali adalah tile spesial seperti pada contoh berikut.

```

/*Contoh dig di special tile*/
| ?- dig.
You cannot dig this tile!

Yes

/*Contoh dig berhasil*/
| ?- dig.
You digged the tile.

Yes

```

### b. Plant

Menanam tile yang dipilih dengan pilihan biji yang ada. Memiliki prasyarat tile yang ditempati sudah digali sebelumnya. Akan menampilkan pesan error seperti di bawah ini bila prasyarat tidak dipenuhi

```

/*Contoh plant di tile yang belum digali*/
| ?- plant.
You have not digged this tile!

Yes

/*Contoh plant berhasil*/
| ?- plant.
You have:
- 2 carrot seed
- 2 corn seed
- 2 tomato seed
- 2 potato seed
What do you want to plant?
| ?- corn.
You planted a corn seed

Yes

/*Contoh plant di tile yang sudah ditanam sebelumnya*/
| ?- plant.
You have planted this tile!

Yes

```

### c. Harvest

Akan memanen tanaman di tile saat ini hanya jika waktunya sudah tepat (melebihi durasi tanamnya). Pesan-pesan kesalahan di bawah ini mungkin muncul bila syarat tersebut tidak dipenuhi.

```

/*Contoh harvest di saat yang belum tepat*/
| ?- harvest.
You cannot harvest it today!

Yes

/*Contoh harvest yang berhasil*/
| ?- harvest.
You harvested corn.

Yes

/*Contoh harvest di tempat yang tidak ada tanamannya*/
| ?- harvest.
You don't have a plant here!

yes

```

## XII. Fishing

Pemain bisa menggunakan *command* fish untuk menangkap ikan jika pemain berada di dekat sebuah *tile* air. Pemain dikatakan dekat dengan *tile* air jika posisi pemain berada di sebelah kiri, kanan, atas, atau bawah suatu *tile* air. Saat *command* fish berhasil dieksekusi, akan ditampilkan pesan ikan apa yang berhasil ditangkap (bisa juga tidak berhasil menangkap apapun) dan exp fishing yang didapat. Jika pemain memiliki job fisherman, akan ditampilkan juga pesan bahwa pemain mendapatkan exp ganda. *Command* fish akan memakan energi yang jumlahnya tergantung level fishing rod.

```
/* Contoh penggunaan command fish dan tidak berhasil menangkap ikan
apapun dengan job fisherman */
| ?- fish.
You didn't get anything!
You gained 10 fishing exp!

YOU GOT DOUBLE EXP!

yes

/* Contoh penggunaan command fish dan berhasil mendapatkan ikan dengan
job fisherman */
| ?- fish.
You got cupang!
You gained 20 fishing exp!

YOU GOT DOUBLE EXP!

yes

/* Contoh penggunaan command fish dan tidak berhasil menangkap ikan
apapun dengan job bukan fisherman */
| ?- fish.
You didn't get anything!
You gained 5 fishing exp!

yes
```

### XIII. Ranching

Menu ranching bisa diakses dengan *command* ranch jika posisi pemain sedang berada di ranch. Bila pemain tidak mau melakukan ranch, pemain dapat keluar dari menu ranch dengan memberikan perintah 'exitRanch'. Untuk memilih hewannya, pemain bisa menginput nama hewannya pada command yang disediakan.

```
| ?- ranch.
** Welcome to the ranch! You have **

1 chicken
```

```

1 sheep
1 cow

*****
What do you want to do?
Type 'exitRanch' if you want to exit this menu
| ?- chicken.
Your chicken hasn't produced any egg
Please check again later.

yes
| ?- sheep.

```

## XIV. Marketplace

Menu marketplace bisa diakses dengan *command* market jika posisi pemain sedang berada di marketplace. Menu market akan memberikan opsi buy, sell, dan exitShop. *Command* lain tidak bisa diakses selama pemain berada di menu market.

[illegible]

a. buy

*Command* buy digunakan untuk memasuki menu pembelian item. Item yang bisa dibeli berupa biji tanaman, hewan ternak, dan upgrade untuk shovel dan fishing rod. Untuk membeli item, pemain menginput nomor dari item tersebut yang sesuai dengan sajian pilihan barangnya.

[illegible]



```

[]***** What do you want to buy ? *****[]
||
|| 1. carrot_seed          (20 golds)      ||
|| 2. tomato_seed         (40 golds)      ||
|| 3. corn_seed           (60 golds)      ||
|| 4. potato_seed        (80 golds)      ||
|| 5. chicken             (500 golds)     ||
|| 6. sheep               (1000 golds)    ||
|| 7. cow                 (1500 golds)    ||
|| 8. level 2 shovel      (500 golds)    ||
|| 9. level 2 fishing_rod (300 golds)    ||
||
||
[]%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%[]

```

```

The input must be integer
Type 0 if you want to exit this menu
| ?- 2.
How many do you want to buy ?
| ?- 2.
You have bought 2 corn_seed
You are charged 120 golds
yes

```

#### b. sell

*Command* sell digunakan untuk memasuki menu penjualan item. Item yang bisa dibeli berupa semua item yang ada di inventory. Untuk menjual item, pemain menginput nama dari item tersebut yang sesuai dengan sajian yang ada di inventory. Jika pemain ingin keluar dari menu ini, pemain dapat menginput 'exitSell' pada command yang meminta penjualan barang.

```

| ?- market.

[]** What do you want to do ? **[]
||
|| > 1. buy                ||
|| > 2. sell               ||
|| > 3. exitShop           ||
||
||
[]%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%[]

| ?- sell.
[]***** Here are your item in your inventory *****[]

- 4 carrot_seed
- 2 corn_seed
- 2 tomato_seed
- 2 potato_seed
- 1 chicken
- 1 sheep
- 1 cow

[]*****[]
What do you want to sell ?

```

```
You can type 'exitSell' if you want to exit this menu
| ?- tomato_seed.
How many do you want to sell ?
| ?- 2.
You sold 2 tomato_seed.
You received 40 golds.

(47 ms) yes
```

### c. exitShop

*Command* exitShop digunakan untuk keluar dari menu market dan hanya bisa dijalankan saat menu market terbuka.

```
| ?- market.

[]** What do you want to do ? **[]
||                                     ||
||          > 1. buy                    ||
||          > 2. sell                    ||
||          > 3. exitShop                ||
||                                     ||
|| %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%[]

/*Contoh penggunaan exitShop saat berada di menu market*/
| ?- exitShop.
Thanks for coming to market.

yes
```

## XV. house

### a. Sleep

Command ini akan mengembalikan energi pemain ke jumlah maksimumnya. Hari juga akan bertambah sehingga tanaman makin dekat ke waktu panennya. Setiap pertambahan hari juga akan dicek apakah hari sudah melebihi batas maksimumnya. Bila sudah melewati batas maksimumnya, maka pemain dinyatakan kalah.

```
/*Hanya menerima command yang legal*/
| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- a.

No

/*Contoh sleep*/
```

```

| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- sleep.
You went to sleep

DAY 2

(16 ms) yes

/*Bila telah melebihi waktu yang ditentukan, pemain akan kalah*/

| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- sleep.
You went to sleep

DAY 51

You have worked hard, but in the end result is all that matters.
May God bless you in the future with kind people!

THANKS FOR PLAYING!

(15 ms) yes

```

#### b. WriteDiary

Pengisian diary hanya bisa dilakukan di house. Pada diary yang diisi, tercatat Day pengisiannya. Isi diary harus diapit oleh tanda petik dan diakhiri oleh titik (‘ ’.). Command ini juga memungkinkan untuk menerima beberapa entry untuk satu hari yang sama.

```

| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- writeDiary.
Write your diary for Day 1
'Ini hari pertamaku'.
Day 1 entry saved

(47 ms) yes

```

### c. ReadDiary

Read diary hanya bisa dilakukan di house. Pemain dapat memilih diary yang telah ditulis di Day tertentu untuk dibaca. Command ini hanya menerima input yang valid.

```
/*Contoh readDiary*/
| ?- readDiary.
Here are the list of your entries:
- Day 1
- Day 3
- Day 4
Which entry do you want to read?

(50 ms) yes

| ?- 1.
Here is your entry for day 1:
ashiaaap.

(40 ms) yes

/*Mungkin juga terdapat beberapa entry untuk satu hari*/
| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- readDiary.
- Day 1
- Day 1
- Day 2

Which entry do you want to read?
1.
Here is your entry for day 1:
Ini hari pertamaku
Here is your entry for day 1:
aku senang sekali

(16 ms) yes
```

### XVI. exit

*Command* exit digunakan untuk keluar dari permainan setelah permainan telah dimulai. Setelah *command* ini dijalankan, *command* yang ada dalam help tidak akan bisa diakses.

```

/* Contoh penggunaan command exit */
| ?- exit.

THANKS FOR PLAYING!

yes

```

## XVII. Goal State

Goal state bukan command pada program, melainkan state yang dicapai saat gold pemain telah mencapai 20000 sebelum melewati 50 hari. Saat mencapai state ini, akan ditampilkan pesan kemenangan.

```

/* Contoh saat mencapai goal state */
| ?- market.

[]** What do you want to do ? **[]
||                                     ||
||          > 1. buy                   ||
||          > 2. sell                  ||
||          > 3. exitShop              ||
||                                     ||
||                                     ||
[]%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%[]

| ?- sell.
[]***** Here are your item in your inventory *****[]

          - 2 carrot_seed
          - 2 corn_seed
          - 2 tomato_seed
          - 2 potato_seed
          - 3 chicken
          - 2 sheep
          - 1 cow

[]*****[]
What do you want to sell ?
You can type 'exitSell' if you want to exit this menu
| ?- carrot_seed.
How many do you want to sell ?
| ?- 1.
You sold 1 carrot_seed.
You received 10 golds.

Congratulations! You have finally collected 20000 golds!

THANKS FOR PLAYING!

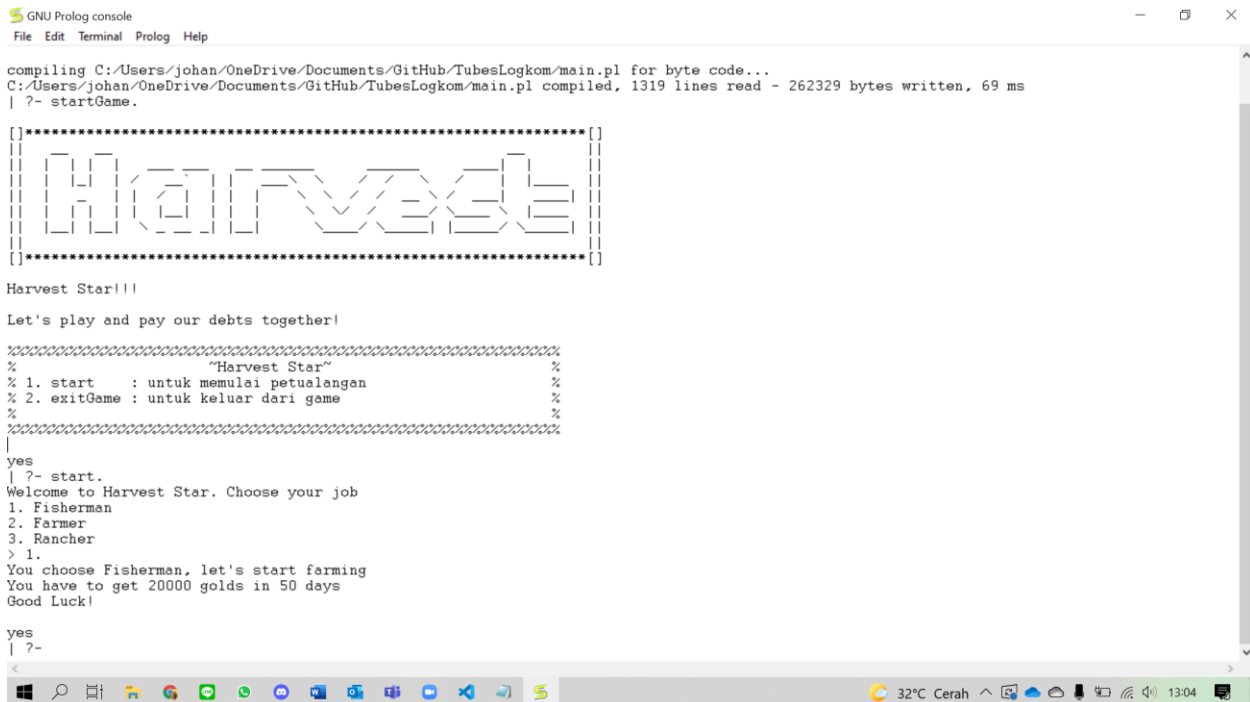
yes

```

## XVIII. Energy

Energy bukan *command* pada program, melainkan atribut tambahan bagi pemain. Pemain memiliki sejumlah energy yang nilainya akan berkurang setiap kali melakukan pergerakan, dig, plant, harvest, dan fish. Besar energi yang digunakan untuk dig, plant, dan harvest ditentukan oleh level shovel sedangkan besar energi yang digunakan untuk fish ditentukan oleh level fishing rod. Jika energi berkurang dan pemain memiliki energi di bawah 50, akan ditampilkan pesan bahwa energi rendah. Jika energi habis dan pemain tidak berada di house, pemain akan dipindahkan ke house dan didenda. Jika energi habis dan pemain berada di house, pemain akan langsung tertidur tanpa didenda. Untuk mengisi kembali energi, pemain dapat menggunakan *command* sleep di house.

# HASIL EKSEKUSI PROGRAM



```
GNU Prolog console
File Edit Terminal Prolog Help

compiling C:/Users/johan/OneDrive/Documents/GitHub/TubesLogkom/main.pl for byte code...
C:/Users/johan/OneDrive/Documents/GitHub/TubesLogkom/main.pl compiled, 1319 lines read - 262329 bytes written, 69 ms
| ?- startGame.

[*****]
[ Harvest Star ]
[*****]

Harvest Star!!!

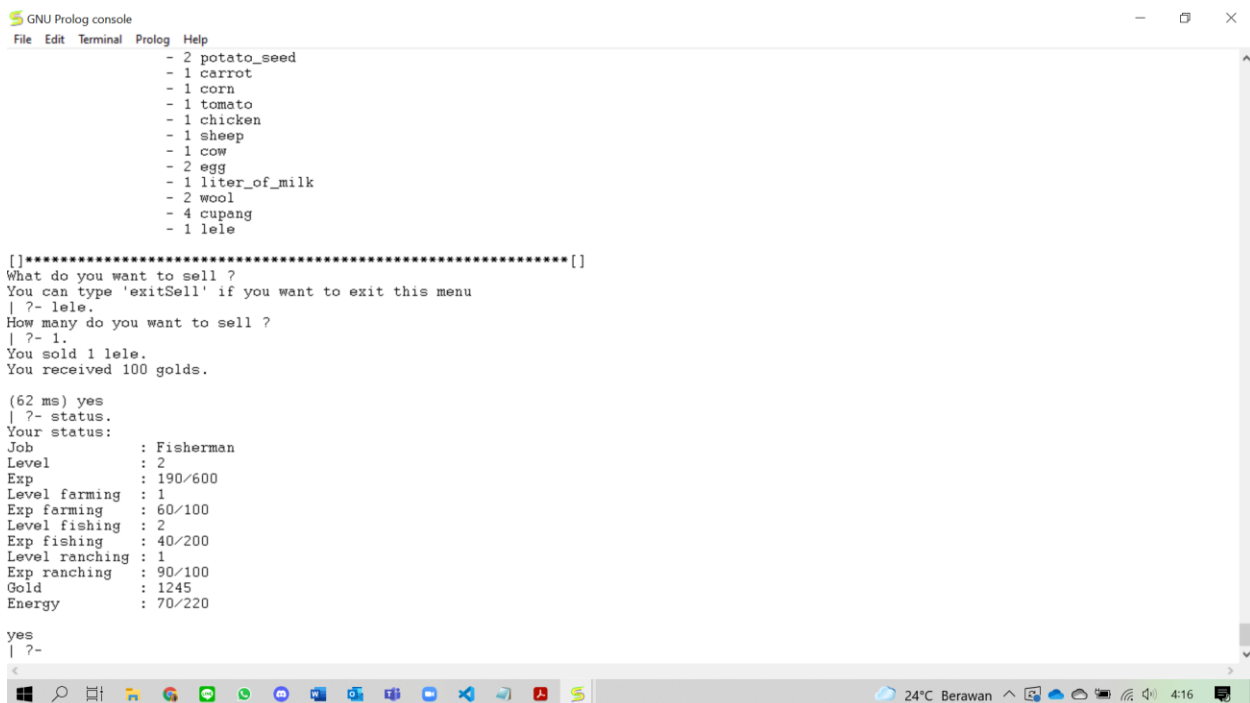
Let's play and pay our debts together!

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%                               ~~~~~~
% 1. start   : untuk memulai petualangan
% 2. exitGame : untuk keluar dari game
%                               ~~~~~~
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

yes
| ?- start.
Welcome to Harvest Star. Choose your job
1. Fisherman
2. Farmer
3. Rancher
> 1.
You choose Fisherman, let's start farming
You have to get 20000 golds in 50 days
Good Luck!

yes
| ?-
```

Gambar 1. startGame dan start



```
GNU Prolog console
File Edit Terminal Prolog Help

- 2 potato_seed
- 1 carrot
- 1 corn
- 1 tomato
- 1 chicken
- 1 sheep
- 1 cow
- 2 egg
- 1 liter_of_milk
- 2 wool
- 4 cupang
- 1 lele

[*****]
What do you want to sell ?
You can type 'exitSell' if you want to exit this menu
| ?- lele.
How many do you want to sell ?
| ?- 1.
You sold 1 lele.
You received 100 golds.

(62 ms) yes
| ?- status.
Your status:
Job       : Fisherman
Level    : 2
Exp       : 190/600
Level farming : 1
Exp farming : 60/100
Level fishing : 2
Exp fishing : 40/200
Level ranching : 1
Exp ranching : 90/100
Gold      : 1245
Energy    : 70/220

yes
| ?-
```

Gambar 2. status

```
GNU Prolog console
File Edit Terminal Prolog Help

#-----o-----#
#---ooo-----#
#---oo-----#
#-H---oo--M---#
#---ooo-----#
#####

(47 ms) yes
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo---PcTCQ---#
#o-----#
#--R-----#
#---o-----#
#---ooo-----#
#---oo-----#
#-H---oo--M---#
#---ooo-----#
#####

yes
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo---PcTCQ---#
#o-----#
#--R-----#
#---o-----#
#---ooo-----#
#---oo-----#
#-H---oo--M---#
#---ooo-----#
#####

(16 ms) yes
| ?- |
```

Gambar 3. map

```
GNU Prolog console
File Edit Terminal Prolog Help

| ?- inventory.
[]***** Your inventory (13 / 100) *****[]

- 2 carrot_seed
- 2 corn_seed
- 2 tomato_seed
- 2 potato_seed
- Level_1_of_shovel
- Level_1_fishing_rod
- 1 chicken
- 1 sheep
- 1 cow

[]*****[]

(32 ms) yes
| ?- throwItem.
[]***** Your inventory (13 / 100) *****[]

- 2 carrot_seed
- 2 corn_seed
- 2 tomato_seed
- 2 potato_seed
- Level_1_of_shovel
- Level_1_fishing_rod
- 1 chicken
- 1 sheep
- 1 cow

[]*****[]
What do you want to throw ?
> carrot_seed.
You have 2 carrot_seed.
How many do you want to throw ?
> 1.
You threw away 1 carrot_seed

(63 ms) yes
| ?- |
```

Gambar 4. inventory dan throwItem



```
GNU Prolog console
File Edit Terminal Prolog Help
| ?- d.
You moved west.

yes
| ?- d.
You moved west.

yes
| ?- d.
You moved west.

yes
| ?- d.
You moved west.

yes
| ?- d.
You moved west.

yes
| ?- d.
You moved west.

You have arrived at the quest centre! Type "quest." to get a quest.

yes
| ?- quest.
You got a new quest!

You need to collect:
- 3 harvest item
- 4 fish
- 5 ranch item

yes
| ?- quest.
You have an on-going quest!

yes
| ?- |
```

Gambar 5. quest

```
GNU Prolog console
File Edit Terminal Prolog Help
| ?- fish.
You got cupang!
You gained 20 fishing exp!

YOU GOT DOUBLE EXP!

yes
| ?- fish.
You got cupang!
You gained 20 fishing exp!

YOU GOT DOUBLE EXP!

yes
| ?- fish.
You didn't get anything!
You gained 10 fishing exp!

YOU GOT DOUBLE EXP!

yes
| ?- fish.
You didn't get anything!
You gained 10 fishing exp!

YOU GOT DOUBLE EXP!

(15 ms) yes
| ?- fish.
You got cupang!
You gained 20 fishing exp!

YOU GOT DOUBLE EXP!

QUEST COMPLETE!
You got 120 Gold and 40 Exp

yes
| ?- |
```

Gambar 6. quest complete

```
GNU Prolog console
File Edit Terminal Prolog Help
| ?- d.
You moved west.

yes
| ?- w.
You moved north.
You have arrived at your house! Type "house." to access the house menu.

(15 ms) yes
| ?- a.
You moved east.

yes
| ?- s.
You moved south.

yes
| ?- s.
You cannot move out of the map!

no
| ?- d.
You moved west.

yes
| ?- d.
You moved west.

yes
| ?- d.
You moved west.
You are close to the waters! Type "fish." to start fishing.

yes
| ?- d.
You cannot move to a water tile!

no
| ?- |
```

Gambar 7. move (w, a, s, d)

```
GNU Prolog console
File Edit Terminal Prolog Help

You need to collect:
- 3 harvest item
- 4 fish
- 5 ranch item

yes
| ?- quest.
You have an on-going quest!

yes
| ?- a.
You moved east.

yes
| ?- dig.
You digged the tile.

yes
| ?- dig.
You cannot dig this tile!

yes
| ?- plant.
You have:
- 1 carrot seed
- 2 corn seed
- 2 tomato seed
- 2 potato seed
What do you want to plant?
| ?- carrot.
You planted a carrot seed

yes
| ?- plant.
You have planted this tile!

yes
| ?- |
```

Gambar 8. dig dan plant

```
GNU Prolog console
File Edit Terminal Prolog Help

#--R-----#
#-----o-----#
#----ooo-----#
#----oo-----#
#H---oo--M---#
#---ooo-----#
#####

yes
| ?- map.
#####
#ooo-----#
#oooo-----#
#oo---PcTCQ-----#
#o-----#
#--R-----#
#-----o-----#
#----ooo-----#
#----oo-----#
#H---oo--M---#
#---ooo-----#
#####

(16 ms) yes
| ?- d.
You moved west.
You have arrived at your corn plant!
Your plant is ready for harvest! Type "harvest." to harvest the plant.

yes
| ?- harvest.
You harvested corn.

yes
| ?- harvest.
You don't have a plant here!

yes
| ?-
```

Gambar 9. harvest

```
GNU Prolog console
File Edit Terminal Prolog Help

(15 ms) yes
| ?- fish.
You didn't get anything!
You gained 10 fishing exp!

YOU GOT DOUBLE EXP!

yes
| ?- fish.
You didn't get anything!
You gained 10 fishing exp!

YOU GOT DOUBLE EXP!

You are exhausted! 48 energy left. Sleep at your house to replenish your energy!

yes
| ?- fish.
You got cupang!
You gained 20 fishing exp!

YOU GOT DOUBLE EXP!

You are exhausted! 38 energy left. Sleep at your house to replenish your energy!

yes
| ?- fish.
You got cupang!
You gained 20 fishing exp!

YOU GOT DOUBLE EXP!

LEVEL FISHING UP!

You are exhausted! 28 energy left. Sleep at your house to replenish your energy!

yes
| ?- |
```

Gambar 10. fish, level up, dan specialty advantage

```
GNU Prolog console
File Edit Terminal Prolog Help
Your chicken lays 1 eggs.
You got 1 eggs!
You gained 10 ranching exp!
This egg will automatically entry to your inventory

yes
| ?- ranch.
** Welcome to the ranch! You have **

      1 chicken
      1 sheep
      1 cow

*****
What do you want to do?
Type 'exitRanch' if you want to exit this menu
| ?- sheep.
Your sheep produced 1 wool
You gained 20 ranching exp!
This wool will automatically entry to your inventory

(16 ms) yes
| ?- ranch.
** Welcome to the ranch! You have **

      1 chicken
      1 sheep
      1 cow

*****
What do you want to do?
Type 'exitRanch' if you want to exit this menu
| ?- cow.
Your cow produced 1 liter of milk
You gained 30 ranching exp!
This milk will automatically entry to your inventory

yes
| ?- |
```

Gambar 11. ranch

```
GNU Prolog console
File Edit Terminal Prolog Help
You have arrived at the marketplace! Type "market." to access the marketplace menu.

yes
| ?- market.

[** What do you want to do ? **]
| |
| | > 1. buy
| | > 2. sell
| | > 3. exitShop
| |
| | [*****]
| |
| ?- buy.

[***** What do you want to buy ? *****]
| |
| | 1. carrot_seed      (20 golds)
| | 2. tomato_seed     (40 golds)
| | 3. corn_seed        (60 golds)
| | 4. potato_seed      (80 golds)
| | 5. chicken          (500 golds)
| | 6. sheep            (1000 golds)
| | 7. cow              (1500 golds)
| | 8. level 2 shovel   (500 golds)
| | 9. level 2 fishing_rod (300 golds)
| |
| | [*****]
| |
The input must be integer
Type 0 if you want to exit this menu
| ?- 1.
How many do you want to buy ?
| ?- 1.
You have bought 1 carrot_seed
You are charged 20 golds

(63 ms) yes
| ?- |
```

Gambar 12. market dan buy

```
GNU Prolog console
File Edit Terminal Prolog Help
You are exhausted! 34 energy left. Sleep at your house to replenish your energy!

yes
| ?- market.

[** What do you want to do ? **]
|
|   > 1. buy
|   > 2. sell
|   > 3. exitShop
|
| %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
|
| ?- sell.
| [***** Here are your item in your inventory *****]
|
|   - 2 carrot_seed
|   - 2 corn_seed
|   - 2 tomato_seed
|   - 2 potato_seed
|   - 3 chicken
|   - 2 sheep
|   - 1 cow
|   - 3 egg
|   - 1 liter_of_milk
|   - 2 wool
|   - 5 cupang
|
| [*****]
| What do you want to sell ?
| You can type 'exitSell' if you want to exit this menu
| ?- cupang.
| How many do you want to sell ?
| ?- 5.
| You sold 5 cupang.
| You received 25 golds.
|
| (16 ms) yes
| ?- |
```

Gambar 13. sell

```
GNU Prolog console
File Edit Terminal Prolog Help
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% ~~~~~Harvest Star~~~~~
% 1. start : untuk memulai petualangan
% 2. exitGame : untuk keluar dari game
%
% %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

yes
| ?- start.
| Welcome to Harvest Star. Choose your job
| 1. Fisherman
| 2. Farmer
| 3. Rancher
| > 1.
| You choose Fisherman, let's start farming
|
| (15 ms) yes
| ?- d.
| You moved west.
|
| (16 ms) yes
| ?- w.
| You moved north.
| You have arrived at your house! Type "house." to access the house menu.
|
| (16 ms) yes
| ?- house.
| What do you want to do?
| - sleep
| - writeDiary
| - readDiary
| - exitHouse
| ?- sleep.
| You want to sleep
|
| DAY 2
|
| (15 ms) yes
| ?- |
```

Gambar 14. house dan sleep

```
GNU Prolog console
File Edit Terminal Prolog Help
#oo-----cTQ-----#
#o-----#
#--R-----#
#-----o-----#
#---ooo-----#
#-----og-----#
#-P---oo---M---#
#---ooo-----#
#####

yes
| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- writeDiary.
Write your diary for Day 2
| ?- ashiaaap.
Day 2 entry saved

(15 ms) yes
| ?- house.
What do you want to do?
- sleep
- writeDiary
- readDiary
- exitHouse
| ?- readDiary.
- Day 2

Which entry do you want to read?
| ?- 2.
Here is your entry for day 2:
ashiaaap

yes
| ?- |
```

Gambar 15. writeDiary dan readDiary (bonus)

```
GNU Prolog console
File Edit Terminal Prolog Help
- exitHouse
| ?- readDiary.
- Day 2

Which entry do you want to read?
| ?- 2.
Here is your entry for day 2:
ashiaaap

yes
| ?- help.
1. status      : untuk menampilkan kondisi terkini
2. map         : untuk menampilkan peta
3. inventory   : untuk menyimpan barang dan equipments tidak terpakai
4. throwItem   : untuk membuang barang dan equipments tidak terpakai
5. quest       : untuk mendapatkan misi baru
6. a          : untuk bergerak 1 langkah ke barat
7. s          : untuk bergerak 1 langkah ke selatan
8. w          : untuk bergerak 1 langkah ke utara
9. d          : untuk bergerak 1 langkah ke timur
10. dig        : untuk menggali tile
11. plant      : untuk menanam seed
12. harvest    : untuk memanen tanaman
13. fish       : untuk mendapatkan ikan
14. ranch      : untuk melihat list hewan ternak beserta jumlahnya
15. market     : untuk masuk ke dalam market
16. buy        : untuk membeli barang
17. sell       : untuk menjual barang
18. exitShop   : untuk keluar dari market
19. house      : untuk masuk ke dalam house
20. sleep      : untuk tidur
21. writeDiary : untuk menulis diary
22. readDiary  : untuk membaca diary
23. exitHouse  : untuk keluar dari house
24. help      : untuk menampilkan segala bantuan
25. exit      : untuk mengakhiri petualangan

(16 ms) yes
| ?- |
```

Gambar 16. help



```
GNU Prolog console
File Edit Terminal Prolog Help
Please check again later.

(15 ms) yes
| ?- w.
You moved north.

You are exhausted! 20 energy left. Sleep at your house to replenish your energy!

(16 ms) yes
| ?- w.
You moved north.
You are close to the waters! Type "fish." to start fishing.

You are exhausted! 18 energy left. Sleep at your house to replenish your energy!

yes
| ?- fish.
You got lele!
You gained 30 fishing exp!

YOU GOT DOUBLE EXP!

You are exhausted! 8 energy left. Sleep at your house to replenish your energy!

yes
| ?- fish.
You didn't get anything!
You gained 10 fishing exp!

YOU GOT DOUBLE EXP!

You are completely exhausted! You fell asleep on the road.
Someone brought you back to your house, but took 35 gold out of your pocket.
You went to sleep

DAY 2

no
| ?- |
```

Gambar 19. energy (kreativitas)



## PEMBAGIAN KERJA

<b>Nama</b>	<b>NIM</b>	<b>Tugas</b>	<b>Persentase</b>
Johannes Winson Sukiatmodjo	13520123	Mengerjakan command start, status, fish, dan help	25%
Ignasius Ferry Priguna	13520126	Mengerjakan command move (w,a,s,d), map, dan energy	25%
Muhammad Gilang Ramadhan	13520137	Mengerjakan main menu, ranch, dan marketplace	25%
Rizky Ramadhana P. K.	13520151	Mengerjakan command house, quest, dan farming	25%