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Module : Intelligence Artificielle II
1ST YEAR OF MASTER'S DEGREE IN
NETWORKS, INFORMATION SYSTEMS & SECURITY (RSSI)
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Système Expert
TP-02 EXO 1

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Chapter 1

Systeme Expert.

1.1 Exercice 1 :

Exercice 1 :

La Base de Règle(BR) :

Rule1: if A and C then F

Rule2: if A and E then G

Rule3: if B then E

Rule4: if G then D

Problem : Prove that if A & B are true then D is true .

Input : A, B

Output : D.

1-Ecrire un script qui reflète l'exécution de cette BR(avec interface graphique).

2-Ensuite, afficher le nombre d'itération du Moteur d'Inférence(M.I) !

FIGURE 1.1: Exo 1

1.1.1 solution

```

1 n=1;
2     switch get(get(handles.GA,'SelectedObject'),'Tag')
3         case 'AT'
4             A=1;
5         case 'AF'
6             A=0;
7     end
8     switch get(get(handles.GB,'SelectedObject'),'Tag')
9         case 'BT'
10            B=1;
11        case 'BF'
12            B=0;
13    end
14    D = 0;
15    C = 0;
16    F = 0;
17    G = 0;
18    E = 0;
19    while (n < 1000) && (D == 0)
20        if (A==1) && (C==1)

```

```

21         F=1;
22     end
23
24     if (A==1) && (E==1)
25         G=1;
26     end
27
28     if (B==1)
29         E=1;
30     end
31
32     if (G==1)
33         D=1;
34         ss = sprintf('D is TRUE and # iterations is = %.0f', n)
35         ;
36     end
37
38     n = n+1;
39 end
40     if (D==1)
41         set(handles.txtout, 'String', ss);
42     else
43         set(handles.txtout, 'String', 'D is FALSE');
44     end

```

1.1.2 executions

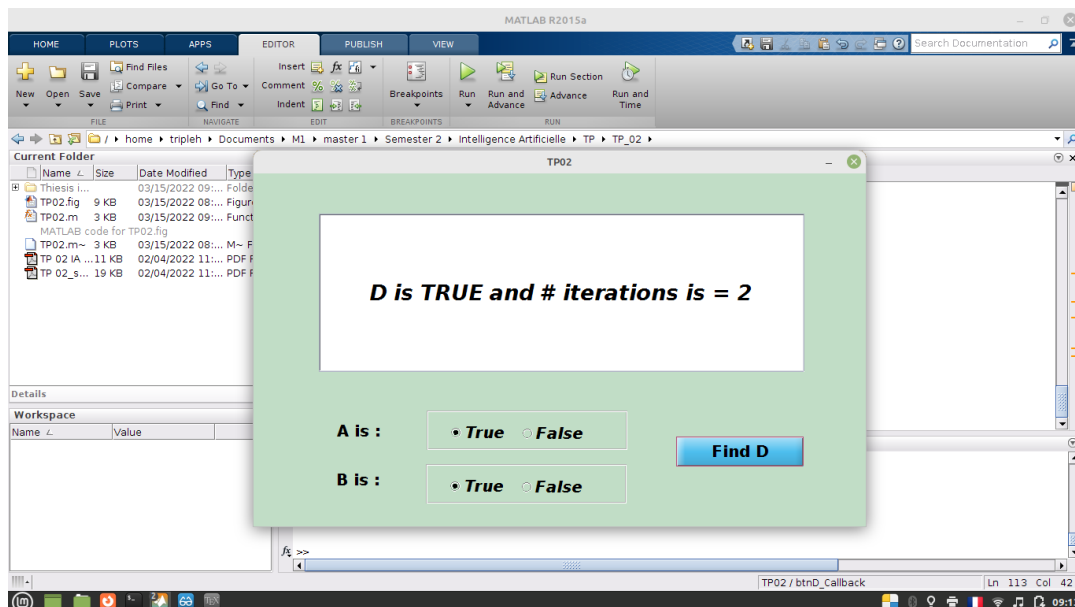


FIGURE 1.2: A=true B=true

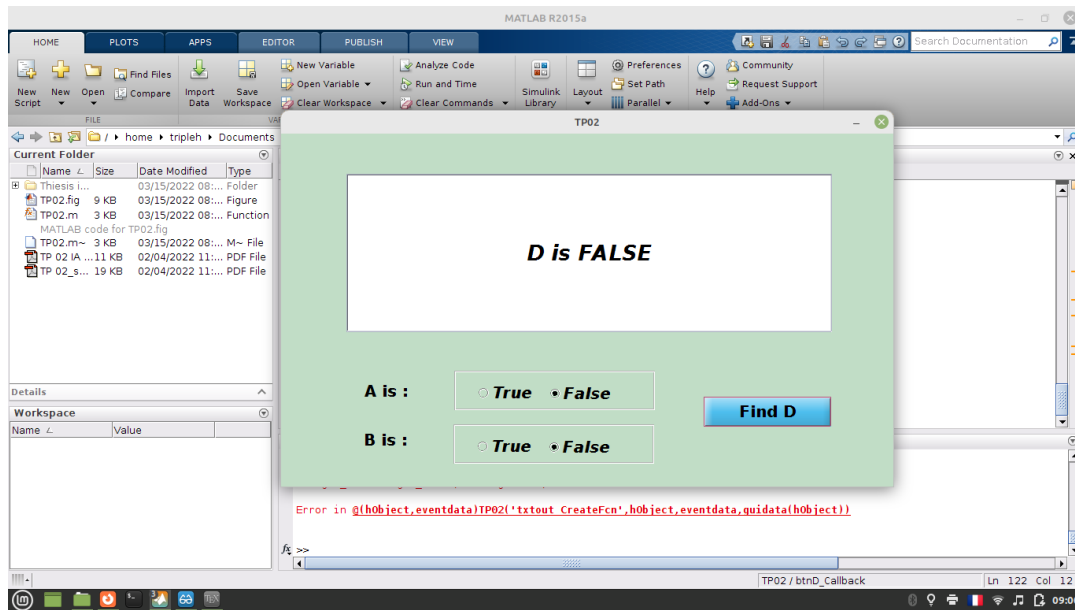


FIGURE 1.3: A=false B=false

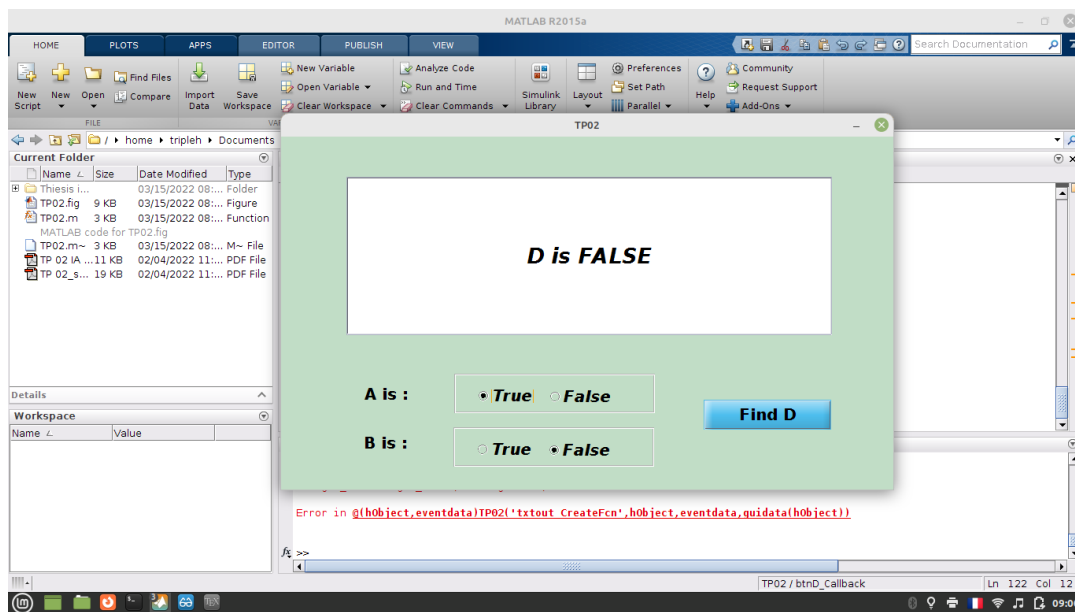


FIGURE 1.4: A=true B=false

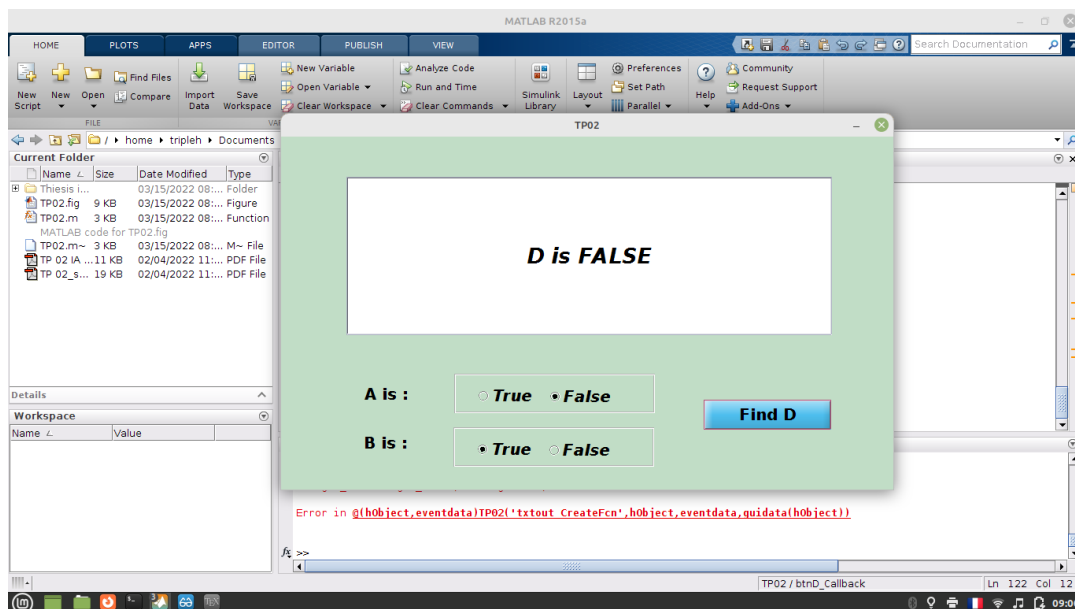


FIGURE 1.5: A=false B=true