BlackJack

```
%black jack

clear all

clc

%Loads the card deck pictures

load("CardDeck.mat")

%figure,imshow([RedDeck{1}]);

cards={'Ace','2','3','4','5','6','7','8','9','10','jack','queen','king'};

suit={'clubs','spades','hearts','diamonds'};

values=[11,2,3,4,5,6,7,8,9,10,10,10,10];

%Initiates 2 variables for 2 card numbers and 2 for 2 card suites. Then

%makes a variable for total

shuff_card1=randi([1 13],1);

shuff_card2=randi([1 13],1);

shuff_suit1=randi([1 4],1);

shuff_suit2=randi([1 4],1);

fir_tot=values(shuff_card1)+values(shuff_card2);

%%2 variables for card picture value in reddeck

card1Pic = 0;

card2Pic=0;

%%Finds card pic value for 1st player card

if shuff_suit1 == 1
```

```
if shuff_card1 == 1

card1Pic = 1;

elseif shuff_card1 ==2

card1Pic = 2;

elseif shuff_card1 ==3

card1Pic = 3;

elseif shuff_card1 ==4

card1Pic = 4;

elseif shuff_card1 ==5

card1Pic = 5;

elseif shuff_card1 ==6

card1Pic = 6;

elseif shuff_card1 ==7

card1Pic = 7;

elseif shuff_card1 ==8

card1Pic = 8;

elseif shuff_card1 ==9

card1Pic = 9;

elseif shuff_card1 ==10

card1Pic = 10;

elseif shuff_card1 ==11

card1Pic = 11;

elseif shuff_card1 ==12
```

```
card1Pic = 12;

elseif shuff_card1 ==13

card1Pic = 13;

end

elseif shuff_suit1 == 2

if shuff_card1 == 1

card1Pic = 14;

elseif shuff_card1 ==2

card1Pic = 15;

elseif shuff_card1 ==3

card1Pic = 16;

elseif shuff_card1 ==4

card1Pic = 17;

elseif shuff_card1 ==5

card1Pic = 18;

elseif shuff_card1 ==6

card1Pic = 19;

elseif shuff_card1 ==7

card1Pic = 20;

elseif shuff_card1 ==8

card1Pic = 21;

elseif shuff_card1 ==9

card1Pic = 22;
```

```
elseif shuff_card1 ==10
card1Pic = 23;
elseif shuff_card1 ==11
card1Pic = 24;
elseif shuff_card1 ==12
card1Pic = 25;
elseif shuff_card1 ==13
card1Pic = 26;
end
elseif shuff_suit1 == 3
if shuff_card1 == 1
card1Pic = 27;
elseif shuff_card1 ==2
card1Pic = 28;
elseif shuff_card1 ==3
card1Pic = 29;
elseif shuff_card1 ==4
card1Pic = 30;
elseif shuff_card1 ==5
card1Pic = 31;
elseif shuff_card1 ==6
card1Pic = 32;
elseif shuff_card1 ==7
```

```
card1Pic = 33;

elseif shuff_card1 ==8

card1Pic = 34;

elseif shuff_card1 ==9

card1Pic = 35;

elseif shuff_card1 ==10

card1Pic = 36;

elseif shuff_card1 ==11

card1Pic = 37;

elseif shuff_card1 ==12

card1Pic = 38;

elseif shuff_card1 ==13

card1Pic = 39;

end

elseif shuff_suit1 == 4

if shuff_card1 == 1

card1Pic = 40;

elseif shuff_card1 ==2

card1Pic = 41;

elseif shuff_card1 ==3

card1Pic = 42;

elseif shuff_card1 ==4

card1Pic = 43;
```

```
elseif shuff_card1 ==5

card1Pic = 44;

elseif shuff_card1 ==6

card1Pic = 45;

elseif shuff_card1 ==7

card1Pic = 46;

elseif shuff_card1 ==8

card1Pic = 47;

elseif shuff_card1 ==9

card1Pic = 48;

elseif shuff_card1 ==10

card1Pic = 49;

elseif shuff_card1 ==11

card1Pic = 50;

elseif shuff_card1 ==12

card1Pic = 51;

elseif shuff_card1 ==13

card1Pic = 52;

end

end

%%Finds card pic value for 2nd player card

if shuff_suit2 == 1

if shuff_card2 == 1
```

```
card2Pic = 1;

elseif shuff_card2 ==2

card2Pic = 2;

elseif shuff_card2 ==3

card2Pic = 3;

elseif shuff_card2 ==4

card2Pic = 4;

elseif shuff_card2 ==5

card2Pic = 5;

elseif shuff_card2 ==6

card2Pic = 6;

elseif shuff_card2 ==7

card2Pic = 7;

elseif shuff_card2 ==8

card2Pic = 8;

elseif shuff_card2 ==9

card2Pic = 9;

elseif shuff_card2 ==10

card2Pic = 10;

elseif shuff_card2 ==11

card2Pic = 11;

elseif shuff_card2 ==12

card2Pic = 12;
```

```
elseif shuff_card2 ==13

card2Pic = 13;

end

elseif shuff_suit2 == 2

if shuff_card2 == 1

card2Pic = 14;

elseif shuff_card2 ==2

card2Pic = 15;

elseif shuff_card2 ==3

card2Pic = 16;

elseif shuff_card2 ==4

card2Pic = 17;

elseif shuff_card2 ==5

card2Pic = 18;

elseif shuff_card2 ==6

card2Pic = 19;

elseif shuff_card2 ==7

card2Pic = 20;

elseif shuff_card2 ==8

card2Pic = 21;

elseif shuff_card2 ==9

card2Pic = 22;

elseif shuff_card2 ==10
```

```
card2Pic = 23;

elseif shuff_card2 ==11

card2Pic = 24;

elseif shuff_card2 ==12

card2Pic = 25;

elseif shuff_card2 ==13

card2Pic = 26;

end

elseif shuff_suit2 == 3

if shuff_card2 == 1

card2Pic = 27;

elseif shuff_card2 ==2

card2Pic = 28;

elseif shuff_card2 ==3

card2Pic = 29;

elseif shuff_card2 ==4

card2Pic = 30;

elseif shuff_card2 ==5

card2Pic = 31;

elseif shuff_card2 ==6

card2Pic = 32;

elseif shuff_card2 ==7

card2Pic = 33;
```

```
        elseif shuff_card2 ==8

card2Pic = 34;

        elseif shuff_card2 ==9

card2Pic = 35;

        elseif shuff_card2 ==10

card2Pic = 36;

        elseif shuff_card2 ==11

card2Pic = 37;

        elseif shuff_card2 ==12

card2Pic = 38;

        elseif shuff_card2 ==13

card2Pic = 39;

end

elseif shuff_suit2 == 4

if shuff_card2 == 1

card2Pic = 40;

        elseif shuff_card2 ==2

card2Pic = 41;

        elseif shuff_card2 ==3

card2Pic = 42;

        elseif shuff_card2 ==4

card2Pic = 43;

        elseif shuff_card2 ==5
```

```
card2Pic = 44;

elseif shuff_card2 ==6

card2Pic = 45;

elseif shuff_card2 ==7

card2Pic = 46;

elseif shuff_card2 ==8

card2Pic = 47;

elseif shuff_card2 ==9

card2Pic = 48;

elseif shuff_card2 ==10

card2Pic = 49;

elseif shuff_card2 ==11

card2Pic = 50;

elseif shuff_card2 ==12

card2Pic = 51;

elseif shuff_card2 ==13

card2Pic = 52;

end

end

%Shows players his cards and values

fprintf('your cards are %s of %s and %s of %s\n',cards{shuff_card1},suit{shuff_suit1},cards{shuff_card2},suit{shuff_suit2})

fprintf('your total value is %d\n',fir_tot)

%Shows Images
```

```matlab
figure,imshow([RedDeck{card1Pic}]);

set(gcf,'name','Player Card');

figure,imshow([RedDeck{card2Pic}]);

set(gcf,'name','Player Card');

%%Asks player to hit or stay

hit=input('enter 1 to hit, 2 to stay: ');

sec_tot=0;

%Keeps on adding a card while player wants to hit

while hit==1

    shuff_card3=randi([1 13],1);

    shuff_suit3=randi([1 4],1);

    sec_tot=values(shuff_card3)+sec_tot;

%%Finds card pic value for 3rd player card

if shuff_suit3 == 1

if shuff_card3 == 1

card3Pic = 1;

elseif shuff_card3 ==2

card3Pic = 2;

elseif shuff_card3 ==3

card3Pic = 3;

elseif shuff_card3 ==4

card3Pic = 4;

elseif shuff_card3 ==5
```

```
card3Pic = 5;

elseif shuff_card3 ==6

card3Pic = 6;

elseif shuff_card3 ==7

card3Pic = 7;

elseif shuff_card3 ==8

card3Pic = 8;

elseif shuff_card3 ==9

card3Pic = 9;

elseif shuff_card3 ==10

card3Pic = 10;

elseif shuff_card3 ==11

card3Pic = 11;

elseif shuff_card3 ==12

card3Pic = 12;

elseif shuff_card3 ==13

card3Pic = 13;

end

elseif shuff_suit3 == 2

if shuff_card3 == 1

card3Pic = 14;

elseif shuff_card3 ==2

card3Pic = 15;
```

```
elseif shuff_card3 ==3
card3Pic = 16;
elseif shuff_card3 ==4
card3Pic = 17;
elseif shuff_card3 ==5
card3Pic = 18;
elseif shuff_card3 ==6
card3Pic = 19;
elseif shuff_card3 ==7
card3Pic = 20;
elseif shuff_card3 ==8
card3Pic = 21;
elseif shuff_card3 ==9
card3Pic = 22;
elseif shuff_card3 ==10
card3Pic = 23;
elseif shuff_card3 ==11
card3Pic = 24;
elseif shuff_card3 ==12
card3Pic = 25;
elseif shuff_card3 ==13
card3Pic = 26;
end
```

```
elseif shuff_suit3 == 3

if shuff_card3 == 1

card3Pic = 27;

elseif shuff_card3 ==2

card3Pic = 28;

elseif shuff_card3 ==3

card3Pic = 29;

elseif shuff_card3 ==4

card3Pic = 30;

elseif shuff_card3 ==5

card3Pic = 31;

elseif shuff_card3 ==6

card3Pic = 32;

elseif shuff_card3 ==7

card3Pic = 33;

elseif shuff_card3 ==8

card3Pic = 34;

elseif shuff_card3 ==9

card3Pic = 35;

elseif shuff_card3 ==10

card3Pic = 36;

elseif shuff_card3 ==11

card3Pic = 37;
```

```
elseif shuff_card3 ==12

card3Pic = 38;

elseif shuff_card3 ==13

card3Pic = 39;

end

elseif shuff_suit3 == 4

if shuff_card3 == 1

card3Pic = 40;

elseif shuff_card3 ==2

card3Pic = 41;

elseif shuff_card3 ==3

card3Pic = 42;

elseif shuff_card3 ==4

card3Pic = 43;

elseif shuff_card3 ==5

card3Pic = 44;

elseif shuff_card3 ==6

card3Pic = 45;

elseif shuff_card3 ==7

card3Pic = 46;

elseif shuff_card3 ==8

card3Pic = 47;

elseif shuff_card3 ==9
```

```matlab
card3Pic = 48;

elseif shuff_card3 ==10

card3Pic = 49;

elseif shuff_card3 ==11

card3Pic = 50;

elseif shuff_card3 ==12

card3Pic = 51;

elseif shuff_card3 ==13

card3Pic = 52;

end

end


%Shows the hit card value

    fprintf('your next card is %s of %s\n',cards{shuff_card3},suit{shuff_suit3})

    fprintf('your total value is %d\n',sec_tot+fir_tot)

%SHows Hit Card Image

figure,imshow([RedDeck{card3Pic}]);

set(gcf,'name','Player Card');

    if sec_tot+fir_tot>21

        fprintf('BUSTED!!!\n');

        break

    end
```

```matlab
%Asks player again if he wants to hit or stay

    hit=input('enter 1 to hit, 2 to stay: ');


    if hit==2

        break

    end

end

%Adds hit card value to total

playerTotal = sec_tot+fir_tot;

%AI starts

%Generates variables for AI cards and the total

shuff_cardAI1=randi([1 13],1);

shuff_suitAI1=randi([1 4],1);

shuff_cardAI2=randi([1 13],1);

shuff_suitAI2=randi([1 4],1);

AI_tot=values(shuff_cardAI1)+values(shuff_cardAI2);

AIcard1Pic = 0;

AIcard2Pic=0;

AIcard3Pic = 0;

%%Sets up AI card 1

if shuff_suitAI1 == 1


if shuff_cardAI1 == 1
```

```
AIcard1Pic = 1;

elseif shuff_cardAI1 ==2

AIcard1Pic = 2;

elseif shuff_cardAI1 ==3

AIcard1Pic = 3;

elseif shuff_cardAI1 ==4

AIcard1Pic = 4;

elseif shuff_cardAI1 ==5

AIcard1Pic = 5;

elseif shuff_cardAI1 ==6

AIcard1Pic = 6;

elseif shuff_cardAI1 ==7

AIcard1Pic = 7;

elseif shuff_cardAI1 ==8

AIcard1Pic = 8;

elseif shuff_cardAI1 ==9

AIcard1Pic = 9;

elseif shuff_cardAI1 ==10

AIcard1Pic = 10;

elseif shuff_cardAI1 ==11

AIcard1Pic = 11;

elseif shuff_cardAI1 ==12

AIcard1Pic = 12;
```

```
elseif shuff_cardAI1 ==13

AIcard1Pic = 13;

end

elseif shuff_suitAI1 == 2

if shuff_cardAI1 == 1

AIcard1Pic = 14;

elseif shuff_cardAI1 ==2

AIcard1Pic = 15;

elseif shuff_cardAI1 ==3

AIcard1Pic = 16;

elseif shuff_cardAI1 ==4

AIcard1Pic = 17;

elseif shuff_cardAI1 ==5

AIcard1Pic = 18;

elseif shuff_cardAI1 ==6

AIcard1Pic = 19;

elseif shuff_cardAI1 ==7

AIcard1Pic = 20;

elseif shuff_cardAI1 ==8

AIcard1Pic = 21;

elseif shuff_cardAI1 ==9

AIcard1Pic = 22;

elseif shuff_cardAI1 ==10
```

```
AIcard1Pic = 23;

elseif shuff_cardAI1 ==11

AIcard1Pic = 24;

elseif shuff_cardAI1 ==12

AIcard1Pic = 25;

elseif shuff_cardAI1 ==13

AIcard1Pic = 26;

end

elseif shuff_suitAI1 == 3

if shuff_cardAI1 == 1

AIcard1Pic = 27;

elseif shuff_cardAI1 ==2

AIcard1Pic = 28;

elseif shuff_cardAI1 ==3

AIcard1Pic = 29;

elseif shuff_cardAI1 ==4

AIcard1Pic = 30;

elseif shuff_cardAI1 ==5

AIcard1Pic = 31;

elseif shuff_cardAI1 ==6

AIcard1Pic = 32;

elseif shuff_cardAI1 ==7

AIcard1Pic = 33;
```

```
elseif shuff_cardAI1 ==8

AIcard1Pic = 34;

elseif shuff_cardAI1 ==9

AIcard1Pic = 35;

elseif shuff_cardAI1 ==10

AIcard1Pic = 36;

elseif shuff_cardAI1 ==11

AIcard1Pic = 37;

elseif shuff_cardAI1 ==12

AIcard1Pic = 38;

elseif shuff_cardAI1 ==13

AIcard1Pic = 39;

end

elseif shuff_suitAI1 == 4

if shuff_cardAI1 == 1

AIcard1Pic = 40;

elseif shuff_cardAI1 ==2

AIcard1Pic = 41;

elseif shuff_cardAI1 ==3

AIcard1Pic = 42;

elseif shuff_cardAI1 ==4

AIcard1Pic = 43;

elseif shuff_cardAI1 ==5
```

```matlab
AIcard1Pic = 44;

elseif shuff_cardAI1 ==6

AIcard1Pic = 45;

elseif shuff_cardAI1 ==7

AIcard1Pic = 46;

elseif shuff_cardAI1 ==8

AIcard1Pic = 47;

elseif shuff_cardAI1 ==9

AIcard1Pic = 48;

elseif shuff_cardAI1 ==10

AIcard1Pic = 49;

elseif shuff_cardAI1 ==11

AIcard1Pic = 50;

elseif shuff_cardAI1 ==12

AIcard1Pic = 51;

elseif shuff_cardAI1 ==13

AIcard1Pic = 52;

end

end

%%Sets up AI card 2

if shuff_suitAI2 == 1


if shuff_cardAI2 == 1
```

```
AIcard2Pic = 1;

elseif shuff_cardAI2 ==2

AIcard2Pic = 2;

elseif shuff_cardAI2 ==3

AIcard2Pic = 3;

elseif shuff_cardAI2 ==4

AIcard2Pic = 4;

elseif shuff_cardAI2 ==5

AIcard2Pic = 5;

elseif shuff_cardAI2 ==6

AIcard2Pic = 6;

elseif shuff_cardAI2 ==7

AIcard2Pic = 7;

elseif shuff_cardAI2 ==8

AIcard2Pic = 8;

elseif shuff_cardAI2 ==9

AIcard2Pic = 9;

elseif shuff_cardAI2 ==10

AIcard2Pic = 10;

elseif shuff_cardAI2 ==11

AIcard2Pic = 11;

elseif shuff_cardAI2 ==12

AIcard2Pic = 12;
```

```
elseif shuff_cardAI2 ==13

AIcard2Pic = 13;

end

elseif shuff_suitAI2 == 2

if shuff_cardAI2 == 1

AIcard2Pic = 14;

elseif shuff_cardAI2 ==2

AIcard2Pic = 15;

elseif shuff_cardAI2 ==3

AIcard2Pic = 16;

elseif shuff_cardAI2 ==4

AIcard2Pic = 17;

elseif shuff_cardAI2 ==5

AIcard2Pic = 18;

elseif shuff_cardAI2 ==6

AIcard2Pic = 19;

elseif shuff_cardAI2 ==7

AIcard2Pic = 20;

elseif shuff_cardAI2 ==8

AIcard2Pic = 21;

elseif shuff_cardAI2 ==9

AIcard2Pic = 22;

elseif shuff_cardAI2 ==10
```

```
AIcard2Pic = 23;

elseif shuff_cardAI2 ==11

AIcard2Pic = 24;

elseif shuff_cardAI2 ==12

AIcard2Pic = 25;

elseif shuff_cardAI2 ==13

AIcard2Pic = 26;

end

elseif shuff_suitAI2 == 3

if shuff_cardAI2 == 1

AIcard2Pic = 27;

elseif shuff_cardAI2 ==2

AIcard2Pic = 28;

elseif shuff_cardAI2 ==3

AIcard2Pic = 29;

elseif shuff_cardAI2 ==4

AIcard2Pic = 30;

elseif shuff_cardAI1 ==5

AIcard2Pic = 31;

elseif shuff_cardAI2 ==6

AIcard2Pic = 32;

elseif shuff_cardAI2 ==7

AIcard2Pic = 33;
```

```
elseif shuff_cardAI2 ==8

AIcard2Pic = 34;

elseif shuff_cardAI2 ==9

AIcard2Pic = 35;

elseif shuff_cardAI2 ==10

AIcard2Pic = 36;

elseif shuff_cardAI2 ==11

AIcard2Pic = 37;

elseif shuff_cardAI2 ==12

AIcard2Pic = 38;

elseif shuff_cardAI2 ==13

AIcard2Pic = 39;

end

elseif shuff_suitAI2 == 4

if shuff_cardAI2 == 1

AIcard2Pic = 40;

elseif shuff_cardAI2 ==2

AIcard2Pic = 41;

elseif shuff_cardAI2 ==3

AIcard2Pic = 42;

elseif shuff_cardAI2 ==4

AIcard2Pic = 43;

elseif shuff_cardAI2 ==5
```

```matlab
AIcard2Pic = 44;

elseif shuff_cardAI2 ==6

AIcard2Pic = 45;

elseif shuff_cardAI2 ==7

AIcard2Pic = 46;

elseif shuff_cardAI2 ==8

AIcard2Pic = 47;

elseif shuff_cardAI2 ==9

AIcard2Pic = 48;

elseif shuff_cardAI2 ==10

AIcard2Pic = 49;

elseif shuff_cardAI2 ==11

AIcard2Pic = 50;

elseif shuff_cardAI2 ==12

AIcard2Pic = 51;

elseif shuff_cardAI2 ==13

AIcard2Pic = 52;

end

end

%%Shows AI Card and value

fprintf('AI cards are %s of %s and %s
of %s\n',cards{shuff_cardAI1},suit{shuff_suitAI1},cards{shuff_cardAI2},suit{shuff_suitAI2})

fprintf('AI total value is %d\n',AI_tot)

%Shows AI card Images
```

```matlab
figure,imshow([RedDeck{AIcard1Pic}]);

set(gcf,'name','Dealer Card');

figure,imshow([RedDeck{AIcard2Pic}]);

set(gcf,'name','Dealer Card');

%Variable for AI hit card total

sec_tot_AI=0;

%%Checks if the dealer has busted

if sec_tot+fir_tot<22

    %AI checks if his total is under 17, if yes then hits otherwise stays

    while sec_tot_AI+AI_tot<17

        shuff_cardAI3=randi([1 13],1);

        shuff_suitAI3=randi([1 4],1);

        sec_tot_AI=values(shuff_cardAI3)+sec_tot_AI;



%%Sets up AI hit card

if shuff_suitAI3 == 1


if shuff_cardAI3 == 1

AIcard3Pic = 1;

elseif shuff_cardAI3 ==2

AIcard3Pic = 2;

elseif shuff_cardAI3 ==3
```

```
AIcard3Pic = 3;

elseif shuff_cardAI3 ==4

AIcard3Pic = 4;

elseif shuff_cardAI3 ==5

AIcard3Pic = 5;

elseif shuff_cardAI3 ==6

AIcard3Pic = 6;

elseif shuff_cardAI3 ==7

AIcard3Pic = 7;

elseif shuff_cardAI3 ==8

AIcard3Pic = 8;

elseif shuff_cardAI3 ==9

AIcard3Pic = 9;

elseif shuff_cardAI3 ==10

AIcard3Pic = 10;

elseif shuff_cardAI3 ==11

AIcard3Pic = 11;

elseif shuff_cardAI3 ==12

AIcard3Pic = 12;

elseif shuff_cardAI3 ==13

AIcard3Pic = 13;

end

elseif shuff_suitAI3 == 2
```

```
if shuff_cardAI3 == 1

AIcard3Pic = 14;

elseif shuff_cardAI3 ==2

AIcard3Pic = 15;

elseif shuff_cardAI3 ==3

AIcard3Pic = 16;

elseif shuff_cardAI3 ==4

AIcard3Pic = 17;

elseif shuff_cardAI3 ==5

AIcard3Pic = 18;

elseif shuff_cardAI3 ==6

AIcard3Pic = 19;

elseif shuff_cardAI3 ==7

AIcard3Pic = 20;

elseif shuff_cardAI3 ==8

AIcard3Pic = 21;

elseif shuff_cardAI3 ==9

AIcard3Pic = 22;

elseif shuff_cardAI3 ==10

AIcard3Pic = 23;

elseif shuff_cardAI3 ==11

AIcard3Pic = 24;

elseif shuff_cardAI3 ==12
```

```
AIcard3Pic = 25;

elseif shuff_cardAI3 ==13

AIcard3Pic = 26;

end

elseif shuff_suitAI3 == 3

if shuff_cardAI3 == 1

AIcard3Pic = 27;

elseif shuff_cardAI3 ==2

AIcard3Pic = 28;

elseif shuff_cardAI3 ==3

AIcard3Pic = 29;

elseif shuff_cardAI3 ==4

AIcard3Pic = 30;

elseif shuff_cardAI3 ==5

AIcard3Pic = 31;

elseif shuff_cardAI3 ==6

AIcard3Pic = 32;

elseif shuff_cardAI3 ==7

AIcard3Pic = 33;

elseif shuff_cardAI3 ==8

AIcard3Pic = 34;

elseif shuff_cardAI3 ==9

AIcard3Pic = 35;
```

```
elseif shuff_cardAI3 ==10

AIcard3Pic = 36;

elseif shuff_cardAI3 ==11

AIcard3Pic = 37;

elseif shuff_cardAI3 ==12

AIcard3Pic = 38;

elseif shuff_cardAI3 ==13

AIcard3Pic = 39;

end

elseif shuff_suitAI3 == 4

if shuff_cardAI3 == 1

AIcard3Pic = 40;

elseif shuff_cardAI3 ==2

AIcard3Pic = 41;

elseif shuff_cardAI3 ==3

AIcard3Pic = 42;

elseif shuff_cardAI3 ==4

AIcard3Pic = 43;

elseif shuff_cardAI3 ==5

AIcard3Pic = 44;

elseif shuff_cardAI3 ==6

AIcard3Pic = 45;

elseif shuff_cardAI3 ==7
```

```matlab
AIcard3Pic = 46;

elseif shuff_cardAI3 ==8

AIcard3Pic = 47;

elseif shuff_cardAI3 ==9

AIcard3Pic = 48;

elseif shuff_cardAI3 ==10

AIcard3Pic = 49;

elseif shuff_cardAI3 ==11

AIcard3Pic = 50;

elseif shuff_cardAI3 ==12

AIcard3Pic = 51;

elseif shuff_cardAI3 ==13

AIcard3Pic = 52;

end

end


%Shows AI hit card and value
    fprintf('AI next card is %s of %s\n',cards{shuff_cardAI3},suit{shuff_suitAI3})
    fprintf('AI total value is %d\n',sec_tot_AI+AI_tot)


%Shows AI  Hit cards
figure,imshow([RedDeck{AIcard3Pic}]);
set(gcf,'name','Dealer Card');
```

```matlab
%%Adds hit card total to AI total

    AITotal = sec_tot_AI+AI_tot;

    %%Checks if the AI has busted yet

    if sec_tot_AI+AI_tot>21

        fprintf('AI busted\n');

        break

%%Checks if the AI total is biggeer than player's, if yes declares AI

%%winner

    elseif(sec_tot_AI+AI_tot>sec_tot+fir_tot)

        fprintf('AI wins\n')

        break

%%Checks for same value of AI and player total. If yes, declares AI winner

    elseif sec_tot_AI+AI_tot==sec_tot+fir_tot

        fprintf('AI and user values are the same, AI wins')

        break

    end

  end

end

%%Final AI total

AITotal = sec_tot_AI+AI_tot;

%Checks if AI or player has busted
```

```
if AITotal<22 && sec_tot+fir_tot<22

%%Checks which total is bigger than declares deserving player winner

if(playerTotal>AITotal)

fprintf('YOU WIN!!!')

elseif(playerTotal<AITotal)

fprintf('AI WINS!!!')

end

end

fprintf('\nGood Game. Go and Play More\n')
```