



❶ Let's start by creating a game with just one player who has to pass position 100 to win:

```
import random  
aposition = 0  
win = False
```

This variable starts the player at position 0.

```
def dice(n):  
    n = n + random.randrange(1,7,1)  
    return n
```

This is a function for rolling a dice.

```
while win == False:  
    roll = raw_input('A Press RETURN to roll')  
    aposition = dice(aposition)  
    print 'You are at', aposition  
    if aposition < 100:  
        win = False  
    else:  
        win = True  
        print 'Player A won!'  
        print '\n'
```

This is a while loop that keeps repeating until the player wins.

This conditional statement that says the player's won if they reach position 100.

❷ Now let's add some conditional statements so the player moves up a snake and down a ladder:

```
import random  
  
aposition = 0  
win = False  
  
def dice(n):  
    n = n + random.randrange(1,7,1)  
    if n == 4:  
        print 'You have gone up a ladder.'  
        return 20  
    elif n == 5:  
        print 'You have gone down a snake.'  
        return 1  
    elif n == 15:  
        print 'You have gone up a ladder.'  
        return 30  
    else:  
        return n
```

Make sure the return commands are tabbed in!

```
while win == False:  
    roll = raw_input('A Press RETURN to roll')  
    aposition = dice(aposition)  
    print 'You are at', aposition  
    if aposition < 100:  
        win = False  
    else:  
        win = True  
        print 'Player A won!'  
        print '\n'
```

Remember to test and debug!

What happens when you change the number 7 in the dice function?

Edit and improve:

- Can you add more **elif** commands to add more snakes and ladders?

③ Next, let's add a second player called Player B:

```
import random

aposition = 0
bposition = 0
win = False

def dice(n):
    n = n + random.randrange(1,7,1)
    if n == 5:
        print 'You have gone up a ladder.'
        return 20
    elif n == 4:
        print 'You have gone down a snake.'
        return 1
    else:
        return n

while win == False:
    roll = raw_input('A Press RETURN to roll')
    aposition = dice(aposition)
    print 'You are at', aposition
    if aposition < 100:
        roll = raw_input('B Press RETURN to roll')
        bposition = dice(bposition)
        print 'You are at', bposition
        if bposition < 100:
            win = False
        else:
            win = True
            print 'Player B won!'
    else:
        win = True
        print 'Player A won!'
    print '\n'
```

*(You will need to delete the **win = False** command that is already there!)*

Edit and improve:

- Change the text being printed on screen when each player has to roll or when a player wins.

④ After that, let's add a sound effect when a player wins:

Add these commands to the top:

```
import random
import time
import sound
```

Add these commands to the very bottom of the program:

```
notes = 'C3', 'D3', 'E3', 'F3', 'G3', 'A3', 'B3', 'C4', 'D4'
for note in notes:
    sound.play_effect('Piano_' + note)
    time.sleep(0.5)
```

This must be **'Piano_'** with a capital P!

Edit and improve:

- Change the notes being played. You can use letters **A-G** and numbers **1-4**.

④ Finally, make the program print the name of who wins:

```
else:
    return n

aplayer = raw_input('Type the name of player A'.)
bplayer = raw_input('Type the name of player B'.)

while win == False:
    roll = raw_input('A Press RETURN to roll')
```

```
else:
    win = True
    print 'Player B won!'
    print 'Well done', bplayer

else:
    win = True
    print 'Player A won!'
    print 'Well done', aplayer
print '\n'
```