

16th April 2021

Previous Day

- int to string, string to int
- int to float, float to int
- int to bool, bool to int
- float to string, string to float
- string to boolean, bool to string

Python if-else

Lecture Flow

- Programs
- MCQs

Topics and Explanations

Program

```
1  age = input("Enter in some value: ")
2
6  age = int(age)
16 print(age<21)
17 print(age>=21)
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture10_notes.py
Enter in some value: 22
False
True
~/RichBiodegradableLicenses$
```

- We are taking the input age as input
- typecasting input into integer
- getting the value as true or false, if age<21 condition is true it will print true else false
- getting the value as true or false, if age>21 condition is true it will print true else false

Program

```
41 print("Hotel Menu")
42
43 if age >= 21:
44     print("Bar Menu")
45 else:
46     print("Bar off limits")
47
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture10_notes.py
Enter in some value: 12
Hotel Menu
Bar off limits
~/RichBiodegradableLicenses$
```

- In this we are taking age as input
- line41, we are printing the string hotel menu
- line43, we are checking the condition if the age is greater than equals to 21 then print the string bar menu
- line45, else will take the obvious left over condition if age is less than 21 then print the string bar off limits

Program

```
72  maths = input("enter math marks:")
73  maths = int(maths)
74  science = input("enter science marks:")
75  science = int(science)
76  social = input("enter social marks:")
77  social = int(social)
78  english = input("enter english marks:")
79  english = int(english)
80  hindi = input("enter hindi marks:")
81  hindi = int(hindi)
82
83  total = maths+science+social+english+hindi
84  percentage = total/5
85
86  print(percentage)
87
88  if percentage >= 40:
89      print("Pass")
90  else:
91      print("Fail")
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture10_notes.py
enter math marks:100
enter science marks:80
enter social marks:70
enter english marks:60
enter hindi marks:50
72.0
Pass
~/RichBiodegradableLicenses$
```

- line72,74,76,78,80 taken input
- line73,75,77,79,81, typecasting all the input
- line83, we are adding all the input which are type casted in the variable total
- line84, percentage we are calculated by dividing total by 5
- line86 we are printing the percentage
- line88, checking if percentage is greater than equal to 40 if true then print Pass
- line90, if the above condition is false then this line will be executed and print Fail

Program

```
72  maths = input("enter math marks:")
73  maths = int(maths)
74  science = input("enter science marks:")
75  science = int(science)
76  social = input("enter social marks:")
77  social = int(social)
78  english = input("enter english marks:")
79  english = int(english)
80  hindi = input("enter hindi marks:")
81  hindi = int(hindi)
82
83  total = maths+science+social+english+hindi
84  percentage = total/5
85
86  print(percentage)
```

```
91  if percentage >= 40:
92      print("Pass")
93      # Assign a grade
94      if percentage >= 90:
95          print("Grade is A")
96      else:
97          if percentage >= 80:
98              print("Grade is B")
99          else:
100             if percentage >= 70:
101                 print("Grade is C")
102             else:
103                 if percentage >= 60:
104                     print("Grade is D")
105                 else:
106                     print("Grade is E")
107             else:
108                 print("Fail")
109
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture10_notes.py
enter math marks:100
enter science marks:80
enter social marks:100
enter english marks:80
enter hindi marks:90
90.0
Pass
Grade is A
~/RichBiodegradableLicenses$
```

- line91, if percentage is greater than equal 40 than print "pass"
- line92 if the above condition is false then checking if the percentage is greater than equal to 90 than print "grade is A"
- line97, if the above condition is false then checking if the percentage is greater than equal to 80 than print "grade is B"
- line100, if the above condition is false then checking if the percentage is greater than equal to 70 than print "grade is C"
- line103, if the above condition is false then checking if the percentage is greater than equal to 60 than print "grade is D"
- line106, if the above condition is false then taking the last default value and print "grade is E"
- if the above condition is also false than print "fail"

To make it more easier to understand we can also write in this manner also like in the given example below

```
116 if 100 > percentage >= 40 :
117     print("Pass")
118
119 if 100 > percentage >= 90 :
120     print("Grade is A")
121 elif 90 > percentage >= 80 :
122     print("Grade is B")
123 elif 80 > percentage >= 70 :
124     print("Grade is C")
125 elif 70 > percentage >= 60 :
126     print("Grade is D")
127 elif 60 > percentage >= 40 :
128     print("Grade is E")
129 elif percentage < 40:
130     print("Fail")
131 else:
132     print("Invalid Input")
```

MCQs

Which of these strings when converted to boolean give False?

Attempted - 38 (73.08%)

EASY



| | | |
|-------------------------------------|----------------------|--------|
| <input checked="" type="checkbox"/> | "" | 89.47% |
| <input type="checkbox"/> | "False" | 5.26% |
| <input type="checkbox"/> | "True" | 2.63% |
| <input type="checkbox"/> | "My Name is Priyesh" | 2.63% |

Find the output:

```
percentage = 80
```

```
if percentage >= 40:
```

```
    print("Pass")
```

```
elif percentage > 70:
```

```
    print("Topper")
```

Attempted - 38 (73.08%)

EASY



- | | |
|--|--------|
| <input checked="" type="checkbox"/> Pass | 60.53% |
| <input type="checkbox"/> Topper | 18.42% |
| <input type="checkbox"/> error | 2.63% |
| <input type="checkbox"/> Pass \n Topper | 21.05% |

Which of the following have no condition with them?

Attempted - 38 (73.08%)

EASY



- | | |
|--|--------|
| <input type="checkbox"/> if | 7.89% |
| <input type="checkbox"/> elif | 21.05% |
| <input checked="" type="checkbox"/> else | 81.58% |

Which of the following is an arithmetic operator?

Attempted - 38 (73.08%)

EASY



- | | |
|--|--------|
| <input type="checkbox"/> == | 18.42% |
| <input type="checkbox"/> and | |
| <input type="checkbox"/> or | |
| <input checked="" type="checkbox"/> ** | 86.84% |