V2_using_conditionals

November 1, 2025

1 Activity: Using Conditionals

1.1 Introduction

In this activity, you will use conditionals to solve the following questions. This activity contains: - `if` statements - `if-else` statements - `if-elif-else` statements - Nested `if` statements - `if` statements with logical operators

Question 1 Using the below modulo operator(%, which returns the remainder after division), write an `if-else` statement that assigns the value `True` to the variable `is_even` if `number` is even or `False` if `number` is odd.

[1]:
```
number = 24
is_even = False

#Modulo Operator
number % 2 == 0
```

[1]:
```
True
```

[3]:
```
# Your code here

if is_even:
    True
else :
    False
```

[2]:
```
# Question 1 Grading Checks

assert type(is_even) == bool
```

Question 2 Write an `if-elif-else` statement that assigns the string `"positive"` to the variable `sign` if the `integer_number` is positive, `"negative"` if `integer_number` is negative, or `"zero"` if `integer_number` is 0.

[5]:
```
integer_number = 0
sign = ''
```

[6]:
```
# Your code here


if integer_number > 0:
    sign = 'positive'
elif integer_number < 0:
    sign = 'negative'
else:
    sign = 'zero'
```

[7]:
```
# Question 2 Grading Checks

assert type(sign) == str
assert len(sign) > 0
```

Question 3 You are given a `dict` called `person` with a person's name and an age.

Write a nested `if` statement that first checks if the person is old enough to vote, and assigns the value `True` to the variable `can_vote` if they are older than 17.

Then, check if they are 21 or older and assigns the value `True` to the `can_rent_car` variable.

Finally, print the `can_vote` and `can_rent_car` variables.

[8]:
```
person = {
    "name": "James Dean",
    "age": 19,
}
can_vote = False
can_rent_car = False
```

[13]:
```
# Your code here

if person['age'] > 21:
    can_rent_car = True
if person['age'] > 17:
    can_vote = True
```

[14]:
```
# Question 3 Grading Checks

assert type(can_vote) == bool
assert type(can_rent_car) == bool
```