```
#Student Grade Calculator
```

```
def Student_grade_calculator(marks,name):
  print(f"Result for {name}")
  if(100 >=marks >= 90):
    print("Grade: A")
    print(f"Very good {name} keep it up")
  elif(90 > marks >= 80):
    print("Grade: B")
    print(f"Very good {name} keep it up")
  elif(80 > marks >= 70):
    print("Grade: C")
    print(f"Good {name} keep it up")
  elif(70 > marks >= 60):
    print("Grade: D")
    print(f"You can do better {name}")
  else:
    print("Grade F")
    print(f"You need to focus on studies {name}, better luck next time")
name = input("Enter your name: ")
while True:  # This creates the loop required by the instructions
    try:
        user_input = input("Enter the marks: ")
        marks = int(user_input)

        # Check if marks are valid (0 to 100)
        if 0 <= marks <= 100:
            Student_grade_calculator(marks, name)
            break  # Stop the loop because input was good
        else:
            print("Invalid marks! Please enter a number between 0 and 100.")

    except ValueError:
        print("Invalid input! Please enter a number, not text.")
```

```
Enter your name: kartik
Enter the marks: 123
Invalid marks! Please enter a number between 0 and 100.
Enter the marks: abc
Invalid input! Please enter a number, not text.
Enter the marks: 80
Result for kartik
Grade: B
Very good kartik keep it up
```

```
#To create a program that gives different messages based on time of day
```

```
import datetime

def get_greeting():
    # Get the current time
    current_time = datetime.datetime.now()

    # Extract the hour (0-23)
    current_hour = current_time.hour

    # Determine the greeting based on the hour
    if 5 <= current_hour < 12:
        return "Good morning!"
    elif 12 <= current_hour < 17:
        return "Good afternoon!"
    elif 17 <= current_hour < 21:
        return "Good evening!"
    else:
        return "Good night!"

# Execute the function and print the result
message = get_greeting()
print(f"Current hour: {datetime.datetime.now().strftime('%H:%M')}")
print(message)
```

```
Current hour: 05:17
Good morning!
```

```
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```

```
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Good morning!
```

```
#Build a number guessing game using if-else statements
```

```
def guess_num(num,guess):
  if guess == num:
    print("Congratulations! You guessed the correct number.")
  elif guess < num:
    print("Too low! Try again.")
  else:
    print("Too High! Try again.")
num = 25
guess = int(input("Guess a number between 1 and 50: "))
guess_num(num,guess)
```

```
Guess a number between 1 and 50: 34
Too High! Try again.
```

```
#Use for loop to print numbers from 1 to 100
```

```
for i in range(1,101):
  print(i)
```

```
1
2
3
4
5
6
7
8
9
10
```

Create a function that calculates area of rectangle

[35]
✓ 2s

```
def area_of_rectangle(length,breath):
  area = length * breath
  print(f"The area of the rectangle is {area}")
length = int(input("Enter the length of the rectangle: "))
breath = int(input("Enter the breath of the rectangle: "))
area_of_rectangle(length,breath)
```

```
Enter the length of the rectangle: 12
Enter the breath of the rectangle: 32
The area of the rectangle is 384
```

Make a simple calculator that can add, subtract, multiply, divide

28]

```
def calculator(num1,num2,operation):
  if(operation == '+'):
    print(num1+num2)
  elif(operation == '-'):
    print(num1-num2)
  elif(operation == '*'):
    print(num1*num2)
  elif(operation == '/'):
    print(num1/num2)
  else:
    print("Invalid operation")
n1 = int(input("Give the first number: "))
n2 = int(input("Give the second number: "))
operator = input("Give the operation: ")
calculator(n1,n2,operator)
```

```
Give the first number: 12
Give the second number: 32
Give the operation: -
-20
```