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COMPUTER ENGINEERING
DAA LAB 4
OUTPUTS
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10-DIGIT-NUMBER

TEST CASE 1:-

```
if __name__ == "__main__":  
    x = 9619184233  
    y = 9820174446  
    result = karatsuba(x, y)  
    print(f"The product of {x} and {y} is {result}.")
```

```
PS F:\VIDHI ROHIRA SY BTECH CE\SEMESTER 3> & C:/Users/DELL/AppData/Local/Microsoft/WindowsApps/python3.11.exe "f:/VIDHI ROHIRA SY BTECH CE/SEMESTER 3/DAA_lab4_karatsuba.py"  
The product of 9619184233 and 9820174446 is 94462067196272709918.
```

TEST CASE 2:-

```
if __name__ == "__main__":  
    x = 9820000612  
    y = 9920417550  
    result = karatsuba(x, y)  
    print(f"The product of \n{x}\n and \n{y}\n is \n{result}.")
```

```
PS F:\VIDHI ROHIRA SY BTECH CE\SEMESTER 3> & C:/Users/DELL/AppData/Local/Microsoft/WindowsApps/python3.11.exe "f:/VIDHI ROHIRA SY BTECH CE/SEMESTER 3/DAA_lab4_karatsuba.py"  
The product of  
9820000612  
and  
9920417550  
is  
97418506412295540600.  
PS F:\VIDHI ROHIRA SY BTECH CE\SEMESTER 3> █
```

50-DIGIT-NUMBER

TEST CASE 3:-

```
if __name__ == "__main__":
    x = 1234567890123456789012345678901234567890
    y = 9876543210987654321098765432109876543210
    result = karatsuba(x, y)
    print(f"The product of {x} and {y} is \n {result}.")
```

```
PS F:\VIDHI ROHIRA SY BTECH CE\SEMESTER 3> C:\Users\DELL\AppData\Local\Microsoft\windowsApps\python3.11.exe "f:\VIDHI ROHIRA SY BTECH CE\SEMESTER 3\DAAB_lab4_karatsuba.py"
```

TEST CASE 4:-

```
if __name__ == "__main__":
    x = int("1" * 50)
    y = int("9" * 50)
    result = karatsuba(x, y)
    print(f"The product of \n{x}\n and \n{y}\n is \n{result}.")
```

[illegible]

100-DIGIT-NUMBER

TES CASE 5:-

```
if __name__ == "__main__":
    x = 1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
    y = 9876543210987654321098765432109876543210987654321098765432109876543210987654321098765432109876543210
    result = karatsuba(x, y)
    print(f"The product of {x} \n and\n {y} is \n {result}.")
```

```
PS F:\VIDHI ROHIRA SY BTECH CE\SEMESTER 3> & C:/Users/DELL/AppData/Local/Microsoft/windowsApps/python3.11.exe "f:/VIDHI ROHIRA SY BTECH CE/S
EMESTER 3/DAA_lab4_karatsuba.py"
The product of 1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
and
98765432109876543210987654321098765432109876543210987654321098765432109876543210987654321098765432109876543210
12193263113702179522618503273866788594511507391563633592367611644557885929879018521520013565005212604785842360920590112635258
98643499378616064616736777929561194939744871208653362292333223746380111263526900.
```

TEST CASE 6:-

```
if __name__ == "__main__":
    x = int("1" * 100)
    y = 0
    result = karatsuba(x, y)
    print(f"The product of \n{x}\n and \n{y}\n is \n{result}.")
```

[illegible]

500-DIGIT-NUMBER

TEST-CASE 7:-

```
if __name__ == "__main__":
    x = int("1" * 500) # A 500-digit number consisting of all 1's
    y = int("9" * 500) # A 500-digit number consisting of all 9's
    result = karatsuba(x, y)
    print(f"The product of {x} \n and \n {y} is \n {result}.")
```

[illegible]

TEST CASE 8:-

```
if __name__ == "__main__":
    x = int("1" * 500)
    y = 3
    result = karatsuba(x, y)
    print(f"The product of {x}\n and {y}\n is {result}.")
```

[illegible]

[illegible]

TEST CASE 10:-

```
if __name__ == "__main__":
    x = int("10" * 500)
    y = 0
    result = karatsuba(x, y)
    print(f"The product of \n{x}\n and \n{y}\n is \n{result}.")
```

[illegible]