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**Studi Kasus 1**

**Algoritma deret**

**Deklarasi**

i : integer

**Begin**

for i in range (1, 12)

if i % 2 <- 0

write(i)

**End**

**Tabel Penyimpanan Deret**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Perintah** | **i < 12 ?** | **i % 2 = 0** | **i** | **output** |
| i = 1, write(i) | TRUE | FALSE | 1 | - |
| i = 2, write(i) | TRUE | TRUE | 2 | 2 |
| i = 3, write(i) | TRUE | FALSE | 3 | - |
| i = 4, write(i) | TRUE | TRUE | 4 | 4 |
| i = 5, write(i) | TRUE | FALSE | 5 | - |
| i = 6, write(i) | TRUE | TRUE | 6 | 6 |
| i = 7, write(i) | TRUE | FALSE | 7 | - |
| i = 8, write(i) | TRUE | TRUE | 8 | 8 |
| i = 9, write(i) | TRUE | FALSE | 9 | - |
| i = 10, write(i) | TRUE | TRUE | 10 | 10 |
| i = 11, write(i) | TRUE | FALSE | 11 | - |
| i = 12, write(i) | FALSE | - | 12 | - |

**Flowchart**

**A picture containing diagram

Description automatically generated**

**Program Python**

for i in range(1, 12) :

  if i % 2 == 0 :

    print(i)

**Output**

2

4

6

8

10

**Studi Kasus 2**

**Algoritma Deret**

**Deklarasi**

total, i : integer

**Begin**

total = 0

for i in range (10)

i <- i + 1

write(i)

total <- total + i

write(total)

**End**

**Tabel Penyimpanan Deret**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Perintah** | **i < 10 ?** | **i** | **total** | **output** |
| i = 0, i = i + 1, total = total + i, write(i) | TRUE | 1 | 1 | 1 |
| i = 1, i = i + 1, total = total + i, write(i) | TRUE | 2 | 3 | 2 |
| i = 2, i = i + 1, total = total + i, write(i) | TRUE | 3 | 6 | 3 |
| i = 3, i = i + 1, total = total + i, write(i) | TRUE | 4 | 10 | 4 |
| i = 4, i = i + 1, total = total + i, write(i) | TRUE | 5 | 15 | 5 |
| i = 5, i = i + 1, total = total + i, write(i) | TRUE | 6 | 21 | 6 |
| i = 6, i = i + 1, total = total + i, write(i) | TRUE | 7 | 28 | 7 |
| i = 7, i = i + 1, total = total + i, write(i) | TRUE | 8 | 36 | 8 |
| i = 8, i = i + 1, total = total + i, write(i) | TRUE | 9 | 45 | 9 |
| i = 9, i = i + 1, total = total + i, write(i) | TRUE | 10 | 55 | 10 |
| i = 10, i = i + 1, total = total + i, write(total) | FALSE | - | - | 55 |

**Flowchart**

**A picture containing diagram

Description automatically generated**

**Program Python**

total = 0

for i in range(10):

  i += 1

  print(i)

  total += i

print("Jumlah Bilangan 1 - 10 adalah: ", total)

**Output**

1

2

3

4

5

6

7

8

9

10

Jumlah Bilangan 1 - 10 adalah:  55

**Studi Kasus 3**

**Algoritma Deret**

**Deklarasi**

tinggi, i : integer

**Begin**

read(tinggi)

if tinggi >= 1 and tinggi <= 100

for i in range (1, tinggi + 1)

write(“\* “ \* i, end=””)

write(“”)

else

write(“Input melebihi batas”)

**End**

**Tabel Penyimpanan Deret**

**Misal tinggi -> 5**

|  |  |  |  |
| --- | --- | --- | --- |
| **Perintah** | **i < tinggi + 1** | **i** | **output** |
| i = 1, write("\* " \* i), end="", write("") | TRUE | 1 | \* |
| i = 2, write("\* " \* i), end="", write("") | TRUE | 2 | \*\* |
| i = 3, write("\* " \* i), end="", write("") | TRUE | 3 | \*\*\* |
| i = 4, write("\* " \* i), end="", write("") | TRUE | 4 | \*\*\*\* |
| i = 5, write("\* " \* i), end="", write("") | TRUE | 5 | \*\*\*\*\* |
| i = 6, write("\* " \* i), end="", write("") | FALSE | 6 | - |

**Flowchart**

Shape

Description automatically generated with medium confidence

**Program Python**

tinggi = int(input("Masukkan tinggi segitiga siku-siku(Max 100) : "))

if tinggi >= 1 and tinggi <= 100 :

    for i in range(1, tinggi + 1):

        print('\* ' \* i, *end*='')

        print('')

else :

    print('Input melebihi batas!')

**Output**

Masukkan tinggi segitiga siku-siku(Max 100) : 5

\*

\* \*

\* \* \*

\* \* \* \*

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