Uke 10, time 1

Onsdag 22. oktober

Introduksjon til objektorientert programmering

Lister i flere dimensjoner

2D strukturer

Linked list

Egne datastrukturer

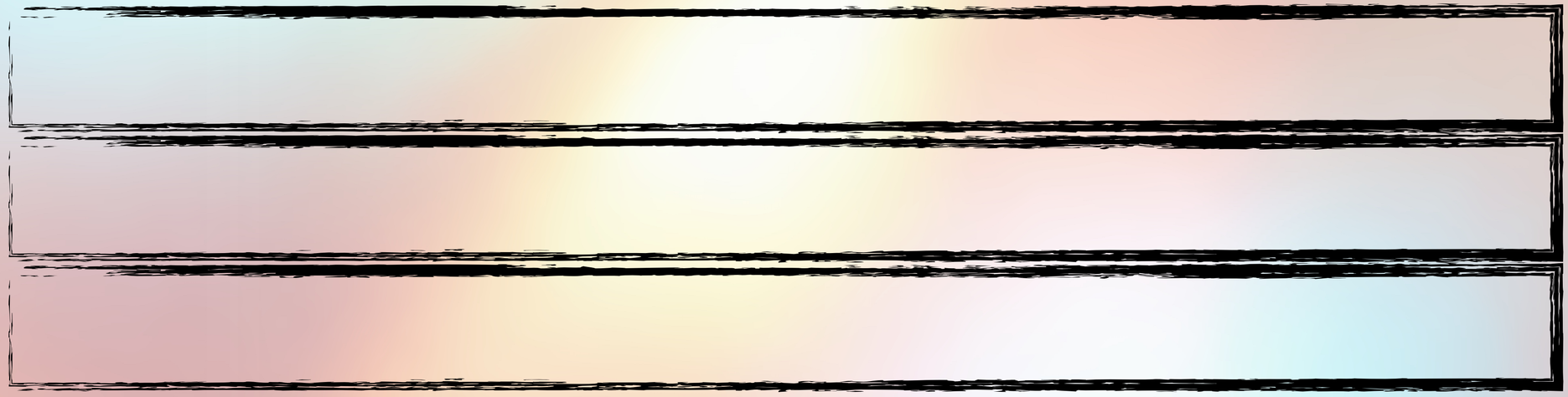
To-dimensjonelle strukturer



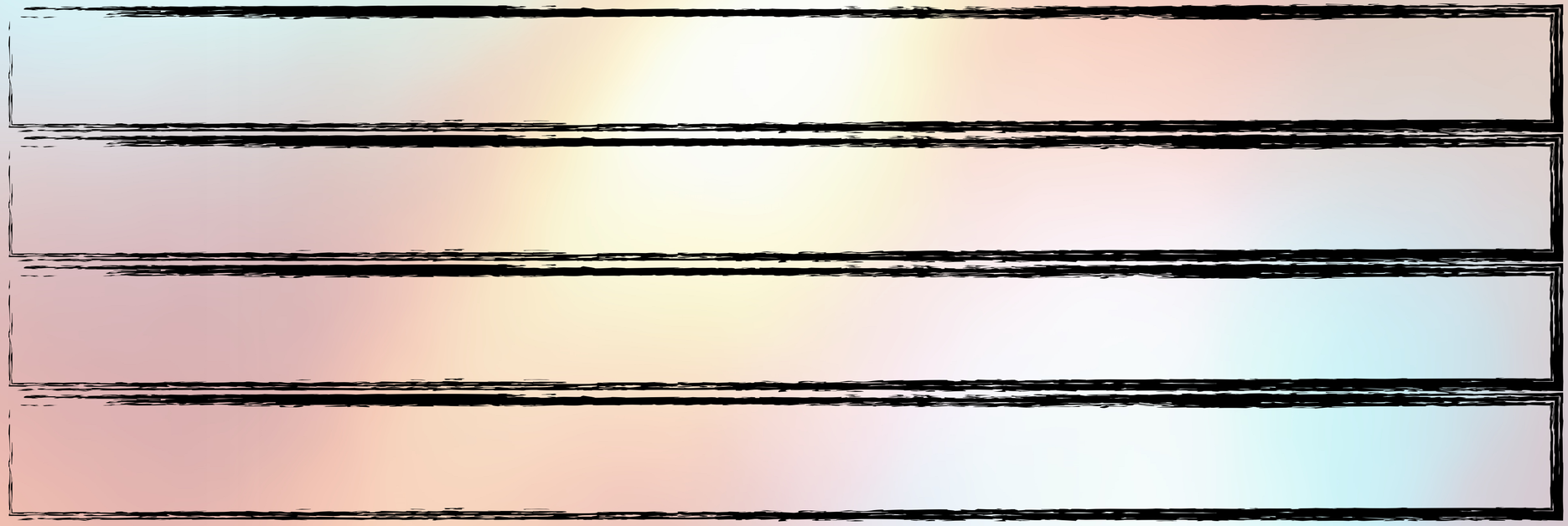
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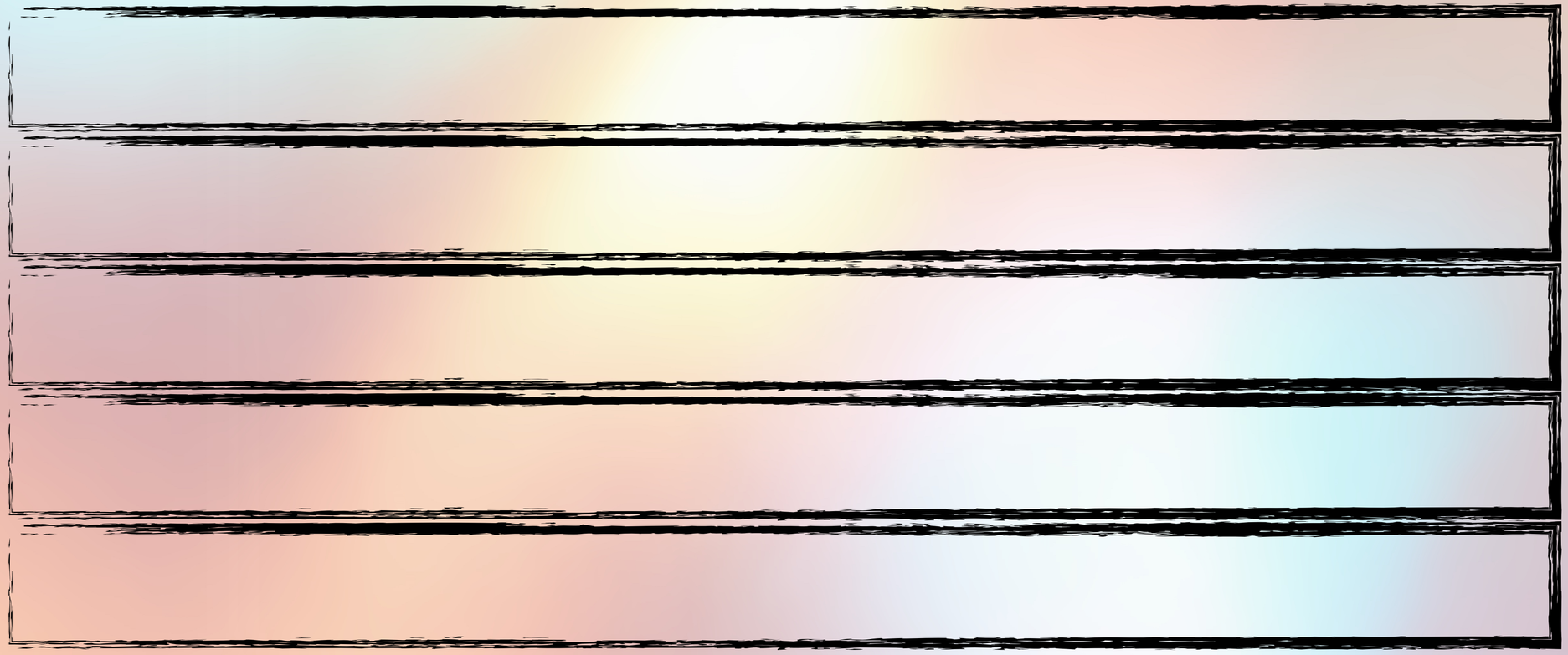
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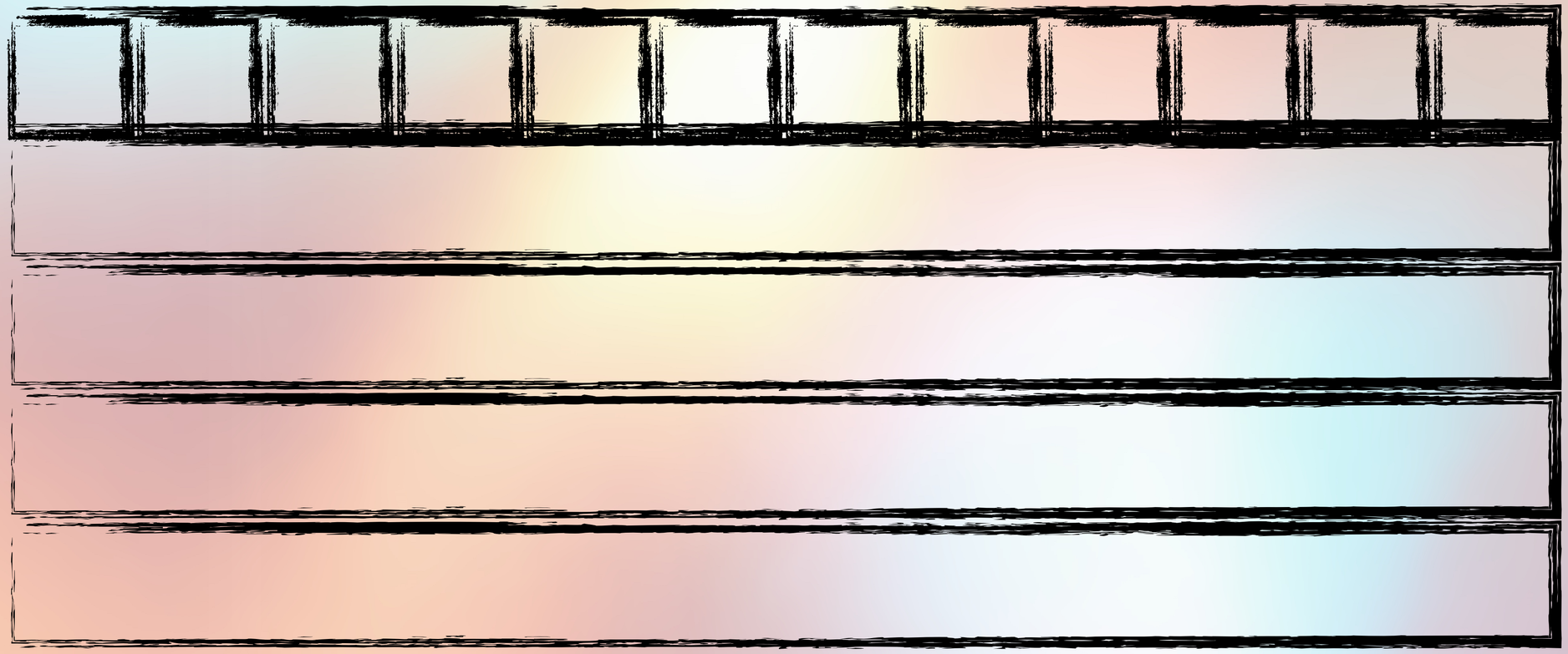
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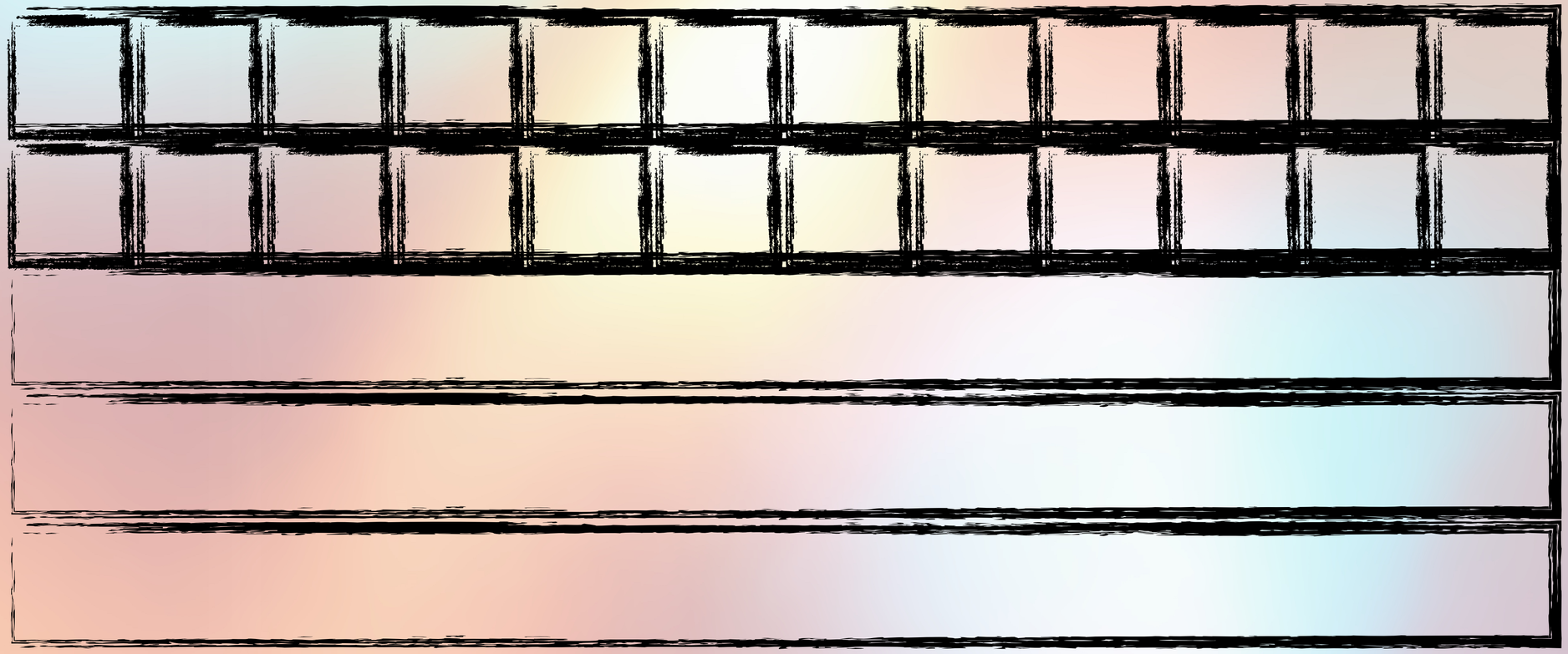
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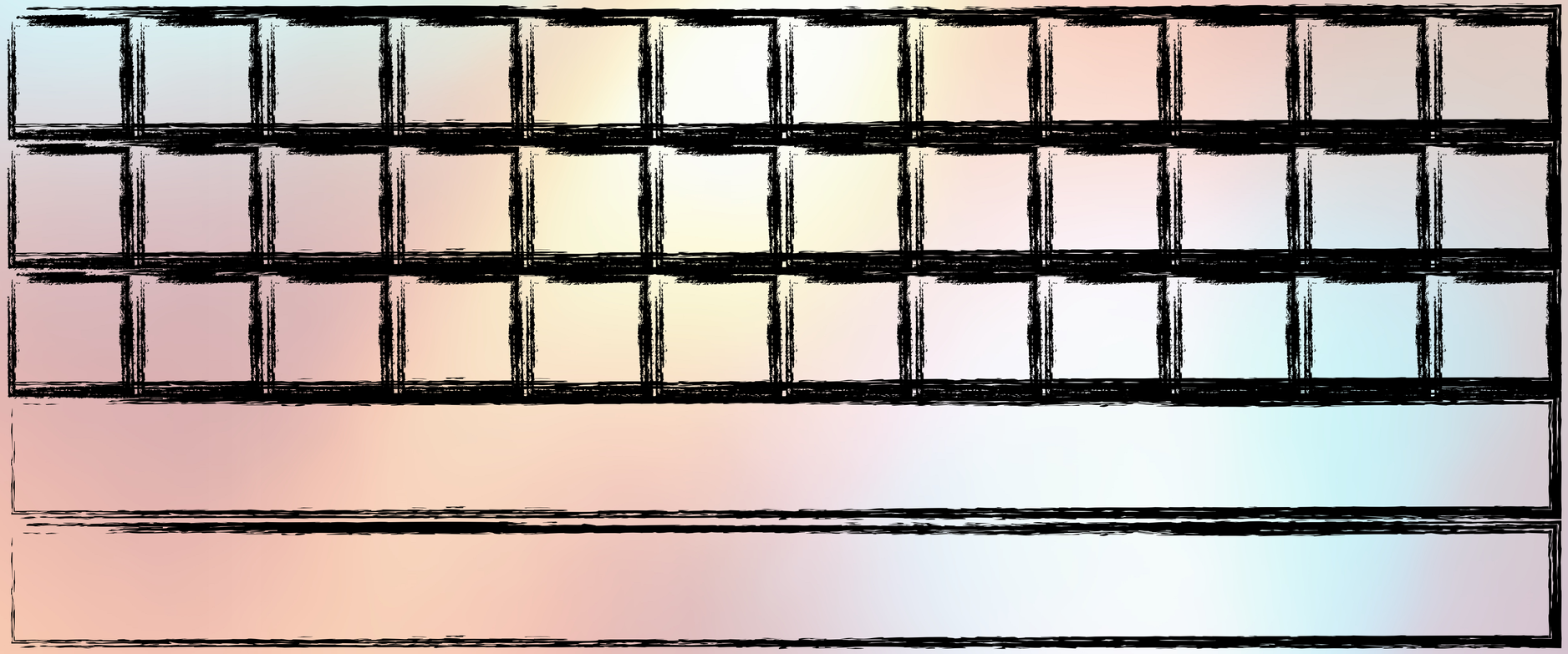
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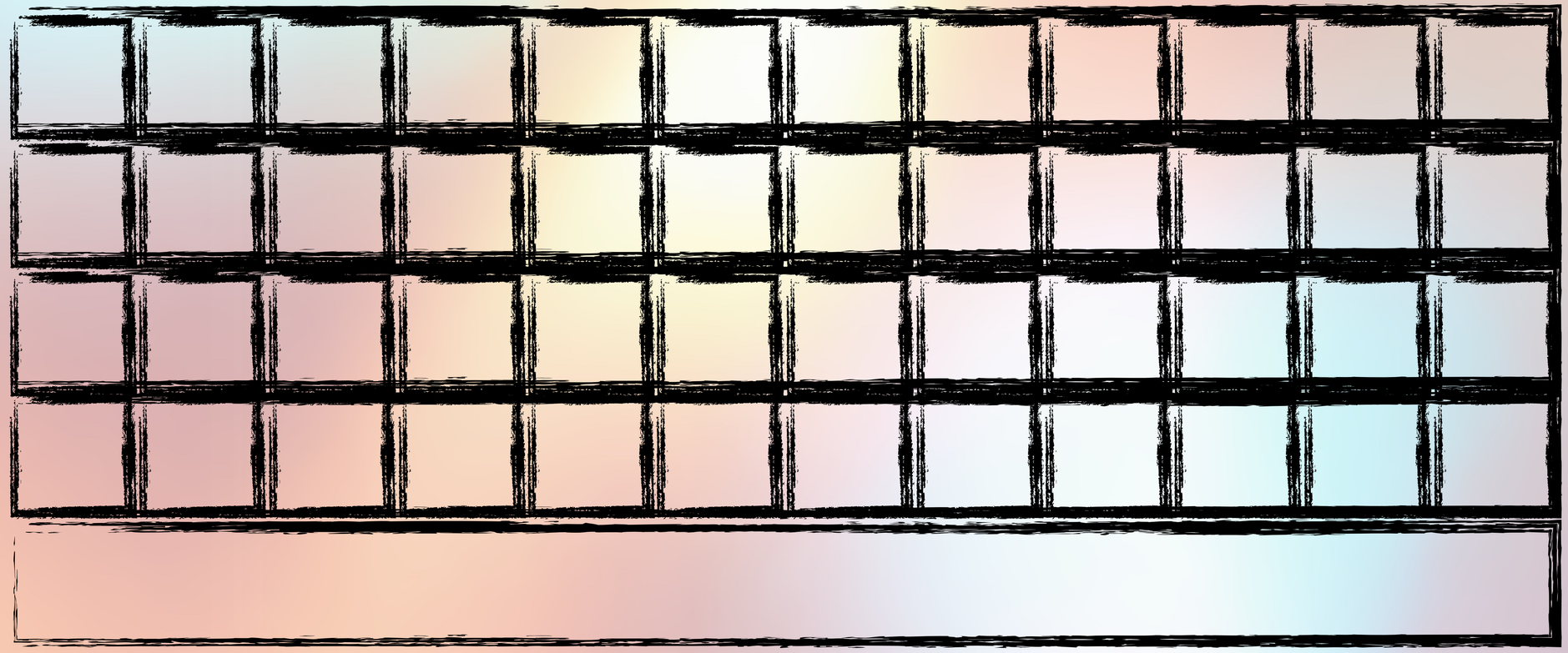
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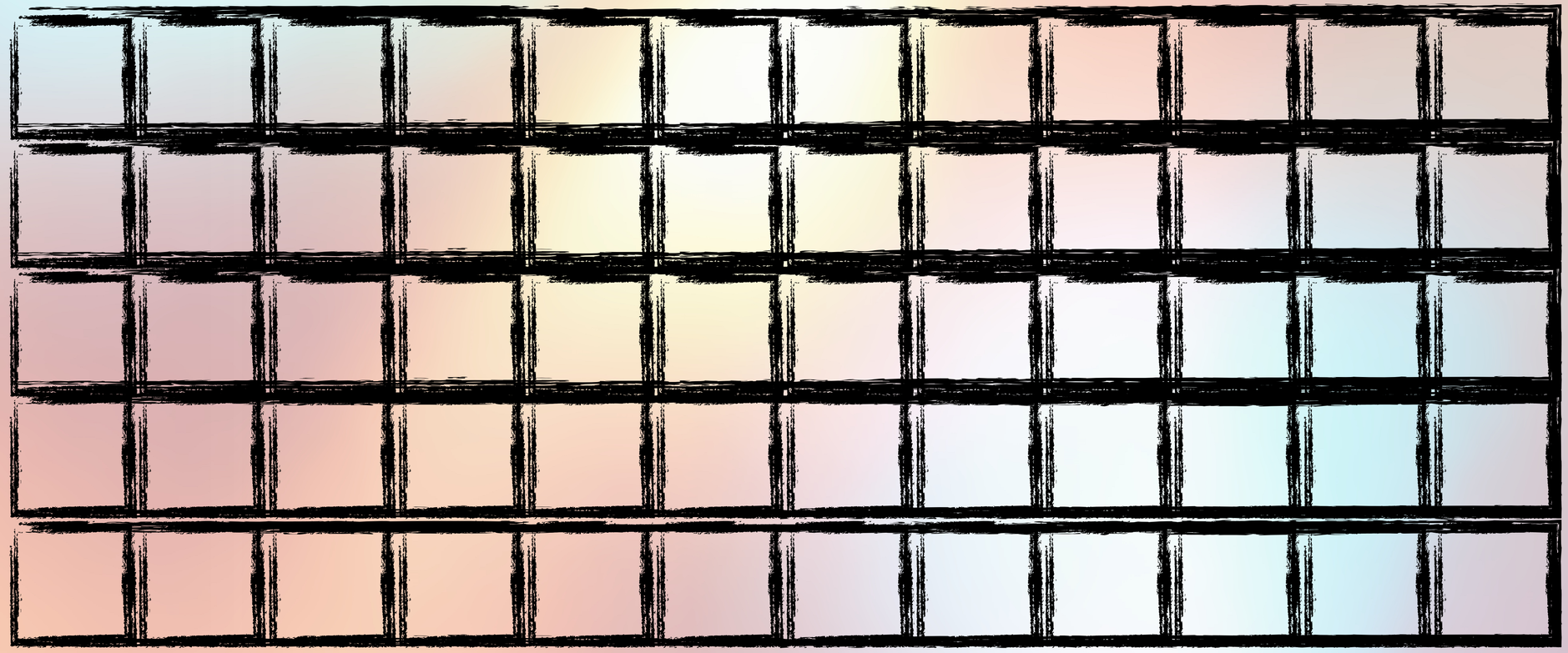
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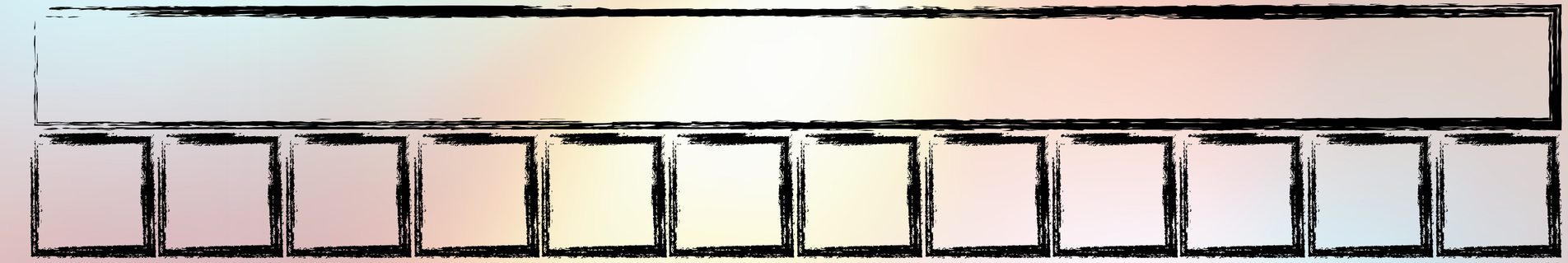
To-dimensjonelle strukturer



To-dimensjonelle strukturer



To-dimensjonelle strukturer



To-dimensjonelle strukturer

```
class SpillBrett:
    def __init__(self, høyde, bredde):
        self._høyde = høyde
        self._bredde = bredde
        self._brett = []
        for _ in range(self._høyde):
            rad = [None] * self._bredde
            self._brett.append(rad)

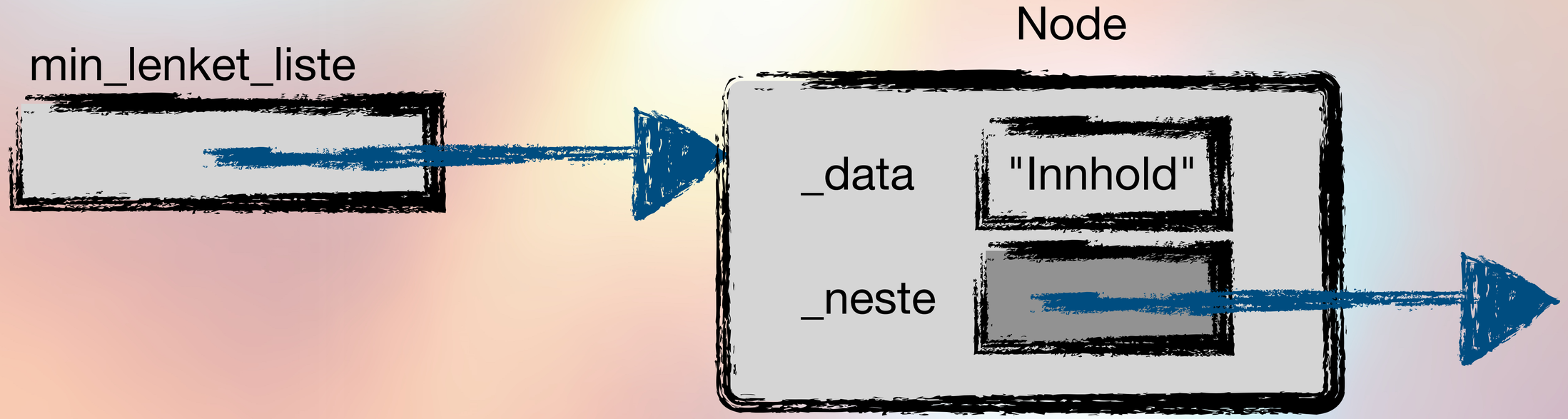
    def gi_verdi(self, rad, kolonne, verdi):
        if self.gyldig(rad, kolonne):
            self._brett[rad][kolonne] = verdi

    def hent_verdi(self, rad, kolonne):
        if self.gyldig(rad, kolonne):
            return self._brett[rad][kolonne]
        return None

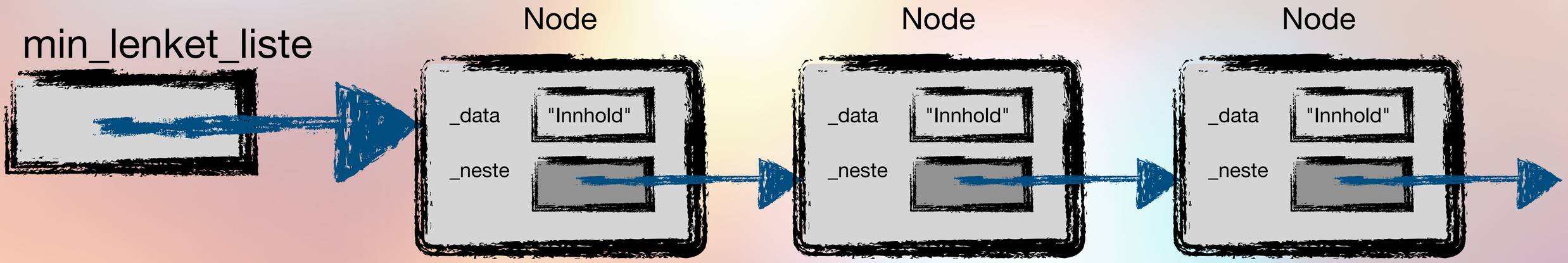
    def gyldig(self, rad, kol):
        return 0 <= rad < self._høyde and 0 <= kol < self._bredde
```

```
brett = SpillBrett(5, 5)
gi_verdi(2, 2, "X")
gi_verdi(1, 3, "O")
print(hent_verdi(2, 2))
```

Lenkede lister



Lenkede lister



Lenkede lister

```
class LenketListe:
    def __init__(self, innhold):
        self._innhold = innhold
        self._neste = None

    def legg_til(self, nytt_innhold):
        if self._neste is None:
            self._neste = LenketListe(nytt_innhold)
        else:
            self._neste.legg_til(nytt_innhold)

    def neste(self):
        return self._neste

    def antall(self):
        antall = 1
        denne = self._neste
        while denne is not None:
            count += 1
            denne = denne.neste()
        return antall

    def hent(self):
        return self._innhold
```

```
min_lenket_liste = LenketListe("Innhold i første")
min_lenket_liste.legg_til("Innhold i lenke 2")
min_lenket_liste.legg_til("Innhold i lenke 3")

print(liste.antall())
print(liste.hent())
print(liste.neste().hent())
```