Genel yapı

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 36 | 35 | 34 | 33 | 32 | 31 |
| 0 | 30 | 29 | 28 | 27 | 26 | 25 |
| 0 | 24 | 23 | 22 | 21 | 20 | 19 |
| 0 | 18 | 17 | 16 | 15 | 14 | 13 |
| 0 | 12 | 11 | 10 | 9 | 8 | 7 |
| 0 | 6 | 5 | 4 | 3 | 2 | 1 |

Görüntü Şablonu

|  |  |  |
| --- | --- | --- |
| 0 | 0 | 0 |
| Sınır değerleri | Çıkış değerleri | Giriş değerleri |

Renk Değerleri

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Giriş |  |  |  |  |  | Çıkış |  | Giriş ve x  Yamaları | | |
| Kaydır | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Kaydır | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Oku | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |

FIFO ve Yama Yapısı

İlk okuma aşamaları

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 35 | 36 | 0 | 0 | 0 | 0 |

İlk yamaya kadarki süreç

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 32 | 33 | 34 | 35 | 36 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 32 | 33 | 34 | 35 | 36 | 0 |
| 25 | 26 | 27 | 28 | 29 | 30 | 0 |

İlk satırın süreci

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | x | x | 0 |
| 31 | 32 | 33 | 34 | 35 | 36 | 0 |  | x | x | 0 |
| 25 | 26 | 27 | 28 | 29 | 30 | 0 |  | x | x | 0 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | x | 0 | 0 |
| 0 | 31 | 32 | 33 | 34 | 35 | 36 |  | x | 0 | 36 |
| 0 | 25 | 26 | 27 | 28 | 29 | 30 |  | x | 0 | 30 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| 30 | 0 | 31 | 32 | 33 | 34 | 35 |  | 0 | 36 | 35 |
| 24 | 0 | 25 | 26 | 27 | 28 | 29 |  | 0 | 30 | 29 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 32 | 33 | 34 | 35 | 36 | 0 |  | 0 | 0 | 0 |
| 25 | 26 | 27 | 28 | 29 | 30 | 0 |  | 32 | 31 | 0 |
| 19 | 20 | 21 | 22 | 23 | 24 | 0 |  | 26 | 25 | 0 |

|  |  |
| --- | --- |
| t\_0=(image\_width+1)  t\_1= (image\_width+1)\*2+2  İlk yama gelene kadar toplamda geçen clock miktarı t\_1 | t\_2= t\_1+ image\_width  İlk yama satırı bitene kadar kadar toplamda geçen clock miktarı t\_2 |

İkinci satırın süreci

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 31 | 32 | 33 | 34 | 35 | 36 |  | 0 | 0 | 36 |
| 0 | 25 | 26 | 27 | 28 | 29 | 30 |  | 31 | 0 | 30 |
| 0 | 19 | 20 | 21 | 22 | 23 | 24 |  | 25 | 0 | 24 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | 0 | 31 | 32 | 33 | 34 | 35 |  | 0 | 36 | 35 |
| 24 | 0 | 25 | 26 | 27 | 28 | 29 |  | 0 | 30 | 29 |
| 18 | 0 | 19 | 20 | 21 | 22 | 23 |  | 0 | 24 | 23 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | 30 | 0 | 31 | 32 | 33 | 34 |  | 36 | 35 | 34 |
| 23 | 24 | 0 | 25 | 26 | 27 | 28 |  | 30 | 29 | 28 |
| 17 | 18 | 0 | 19 | 20 | 21 | 22 |  | 24 | 23 | 22 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 26 | 27 | 28 | 29 | 30 | 0 |  | 32 | 31 | 0 |
| 19 | 20 | 21 | 22 | 23 | 24 | 0 |  | 26 | 25 | 0 |
| 13 | 14 | 15 | 16 | 17 | 18 | 0 |  | 20 | 19 | 0 |

|  |  |
| --- | --- |
| t\_3 = t\_2+2  t\_3 = t\_1+ image\_width+2  Bir sonraki satırın yaması gelene kadar toplamda geçen clock miktarı t\_3 | t\_4=t\_1+(t\_3-t\_1)\* image\_height-2  t\_4=(image\_width+1)\*2+ (image\_width+2)\*image\_height  Tüm görüntünün okuması için geçen clock miktarı t\_4  İlk defa okunması için geçen clock miktarı t\_4+t\_0 |

1920\*1080 görüntü için yamanın tüm elemanlarının sürekli baştan okuması=9\*1920\*1080=18662400

1920\*1080 görüntü için yamanın tüm elemanlarının pipelined okuması= init: 2081523 iter:2079602