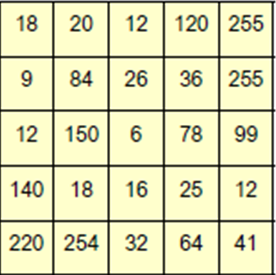
**ນ ໃຈປະສົງ ວົງພັນສີ 3CS2**

**ວຽກບ້ານວິຊາ: ການປະມວນຜົນຮູບພາບ**

1. ຄິດໄລ່ຫາ Median Filter ແລະ Mean Filter ແບບຕື່ມຄ່າສະທ້ອນໃສ່ຂອບພາບ
   * Median Filter

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 9 | 9 | 84 | 26 | 36 | 255 | 255 |
| 12 | 12 | 150 | 6 | 78 | 99 | 99 |
| 140 | 140 | 18 | 16 | 25 | 12 | 12 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  | 18 |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 12 | 12 | 18 | 18 | 20 | 20 | 26 | 84 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 20 | 12 | 18 | 20 | 12 | 9 | 84 | 26 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 9 | 18 | 18 | 18 | 18 | 20 | 20 | 84 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 18 | 20 | 18 | 18 | 20 | 9 | 9 | 84 |

ຫຼັງຈາກລຽນລຳດັບແຕ່ຄ່ານ້ອຍສຸດ ຫາຄ່າໃຫ່ຍສຸດ

ຄ່າຟິກເຊວກ່ອນ ລຽນລຳດັບ

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 26 | 36 | 120 | 120 | 255 | 255 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 120 | 255 | 12 | 120 | 255 | 26 | 36 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 20 | 20 | 26 | 36 | 84 | 120 | 120 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 12 | 120 | 20 | 12 | 120 | 84 | 26 | 36 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 9 | 12 | 12 | 18 | 18 | 20 | 84 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 18 | 20 | 9 | 9 | 84 | 12 | 12 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36 | 120 | 120 | 255 | 255 | 255 | 255 | 255 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 120 | 255 | 255 | 120 | 255 | 255 | 36 | 255 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 12 | 20 | 26 | 36 | 78 | 84 | 120 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 12 | 120 | 84 | 26 | 36 | 150 | 6 | 78 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 9 | 12 | 12 | 18 | 20 | 26 | 84 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 20 | 12 | 9 | 84 | 26 | 12 | 150 | 6 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36 | 78 | 99 | 99 | 120 | 255 | 255 | 255 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 120 | 255 | 255 | 36 | 255 | 255 | 78 | 99 | 99 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 12 | 18 | 26 | 32 | 99 | 120 | 255 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 120 | 255 | 26 | 32 | 255 | 6 | 18 | 99 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 9 | 12 | 16 | 18 | 26 | 84 | 140 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 84 | 26 | 12 | 150 | 6 | 140 | 18 | 16 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 9 | 12 | 12 | 18 | 84 | 140 | 140 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 9 | 84 | 12 | 12 | 150 | 140 | 140 | 18 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 12 | 16 | 25 | 26 | 36 | 74 | 99 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 36 | 255 | 6 | 78 | 99 | 16 | 25 | 12 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 16 | 18 | 25 | 26 | 36 | 78 | 84 | 150 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 84 | 26 | 36 | 150 | 6 | 78 | 18 | 16 | 25 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 18 | 140 | 140 | 150 | 220 | 220 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 150 | 140 | 140 | 18 | 220 | 220 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 25 | 36 | 78 | 99 | 99 | 255 | 255 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36 | 255 | 255 | 78 | 99 | 99 | 25 | 12 | 12 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 16 | 18 | 25 | 32 | 64 | 78 | 150 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 150 | 6 | 78 | 18 | 16 | 25 | 254 | 32 | 64 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 12 | 16 | 18 | 32 | 140 | 150 | 220 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 150 | 6 | 140 | 18 | 16 | 220 | 254 | 32 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 25 | 41 | 41 | 64 | 78 | 99 | 99 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 78 | 99 | 99 | 25 | 12 | 12 | 64 | 41 | 41 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 12 | 16 | 25 | 32 | 41 | 64 | 78 | 99 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 78 | 99 | 16 | 25 | 12 | 32 | 64 | 41 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 18 | 32 | 32 | 140 | 220 | 220 | 254 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 140 | 18 | 16 | 220 | 254 | 32 | 220 | 254 | 32 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 140 | 140 | 220 | 220 | 220 | 220 | 254 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 140 | 140 | 18 | 220 | 220 | 254 | 220 | 220 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 16 | 25 | 32 | 32 | 41 | 41 | 64 | 64 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 25 | 12 | 32 | 64 | 41 | 32 | 64 | 41 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 18 | 25 | 32 | 32 | 64 | 64 | 254 | 254 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 16 | 25 | 254 | 32 | 64 | 254 | 32 | 64 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 12 | 25 | 41 | 41 | 41 | 41 | 64 | 64 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 12 | 12 | 64 | 41 | 41 | 64 | 41 | 41 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  | 18 | 18 | 26 | 120 | 255 |  |
|  | 18 | 18 | 36 | 32 | 120 |  |
|  | 18 | 18 | 26 | 26 | 78 |  |
|  | 140 | 32 | 32 | 32 | 41 |  |
|  | 220 | 140 | 32 | 32 | 41 |  |
|  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 9 | 9 | 84 | 26 | 36 | 255 | 255  **ເຮັດຈົນຄົບທຸກພິກເຊວ** |
| 12 | 12 | 150 | 6 | 78 | 99 | 99 |
| 140 | 140 | 18 | 16 | 25 | 12 | 12 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |

* **Mean Filter**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 9 | 9 | 84 | 26 | 36 | 255 | 255 |
| 12 | 12 | 150 | 6 | 78 | 99 | 99 |
| 140 | 140 | 18 | 16 | 25 | 12 | 12 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |
| 220 | 220 | 254 | 32 | 645 | 41 | 41 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

ສູດການຄິດໄລ່ຫາ Mean Filter

ຫຼື

ແທນຄ່າ

**ຄຳຕອບສຸດທ້າຍ**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 18 | 18 | 20 | 12 | 120 | 255 | 255 |
| 9 | 9 | 84 | 26 | 36 | 255 | 255 |
| 12 | 12 | 150 | 6 | 78 | 99 | 99 |
| 140 | 140 | 18 | 16 | 25 | 12 | 12 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |
| 220 | 220 | 254 | 32 | 64 | 41 | 41 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  | 24 | 24 | 121 | 200 | 37 |  |
|  | 37 | 37 | 59 | 99 | 161 |  |
|  | 64 | 51 | 49 | 61 | 97 |  |
|  | 130 | 94 | 71 | 41 | 52 |  |
|  | 187 | 132 | 84 | 36 | 38 |  |
|  |  |  |  |  |  |  |