OUTPUT:
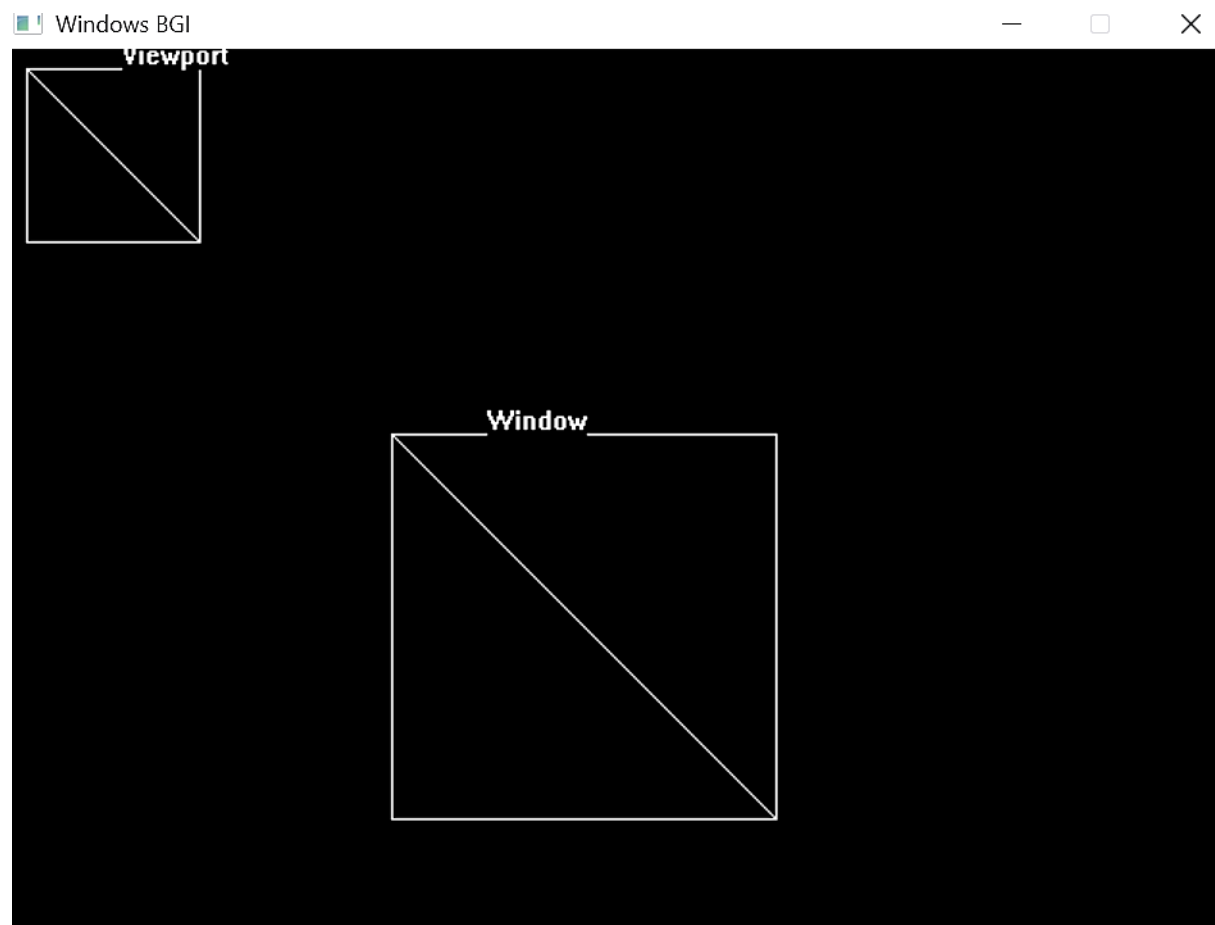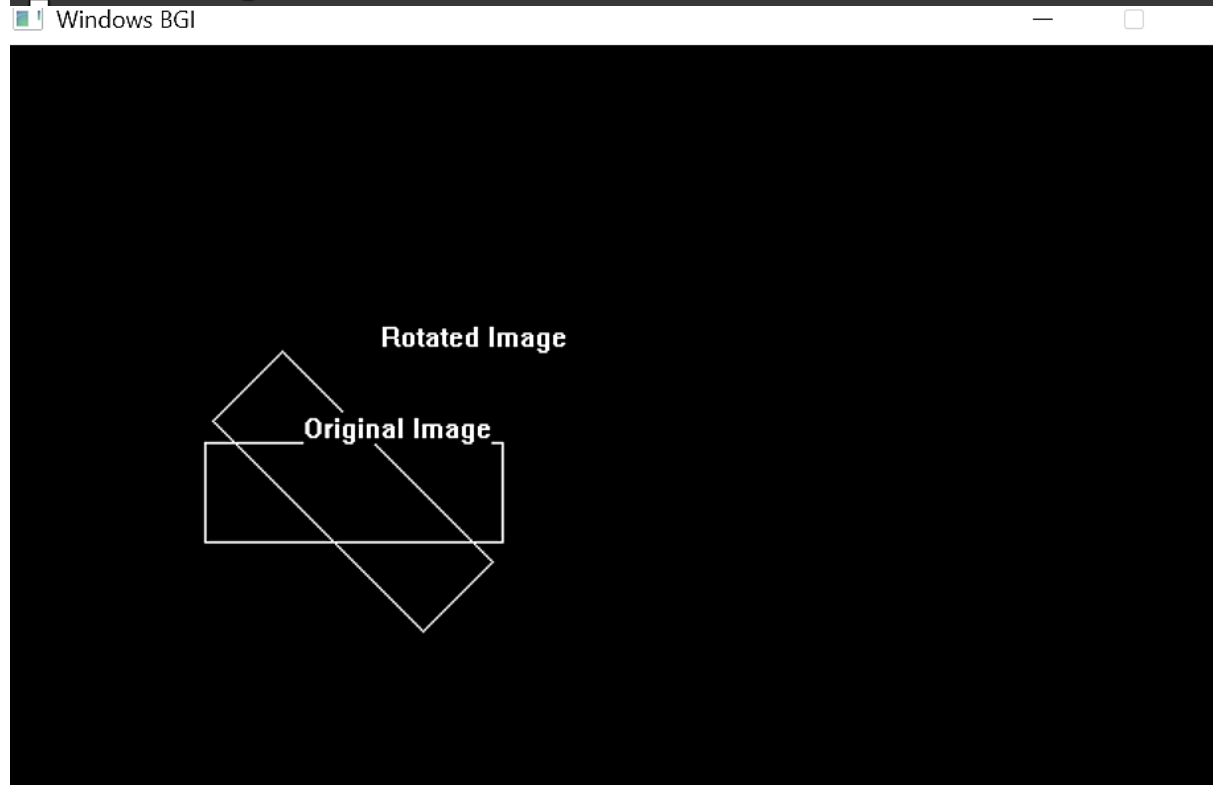
PS C:\Users\ASUS\OneDrive\Desktop\Paras-CG> cd "c:\Users\ASUS\OneD
i32 -lcomdlg32 -luuid -loleaut32 -lole32 } ; if ($?) { .\16 }

OUTPUT:


```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-CG> cd "c:\Users\ASUS\OneDri
i32 -lcomdlg32 -luuid -loleaut32 -lole32 } ; if ($?) { .\15 }
Enter top-left coordinates(x1,z1):100 200
Enter bottom-right coordinates(x2,z2):250 250
Enter the angle of rotation:45
```
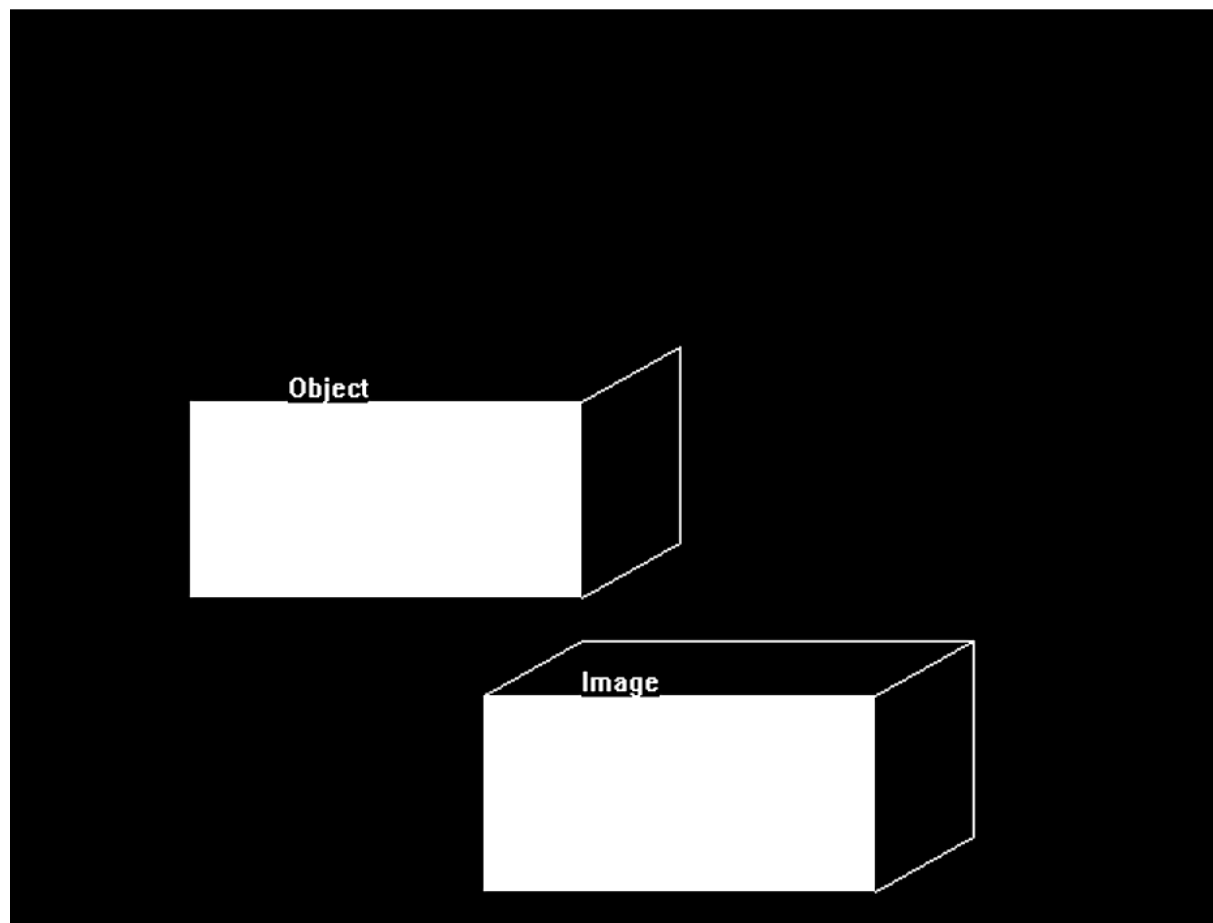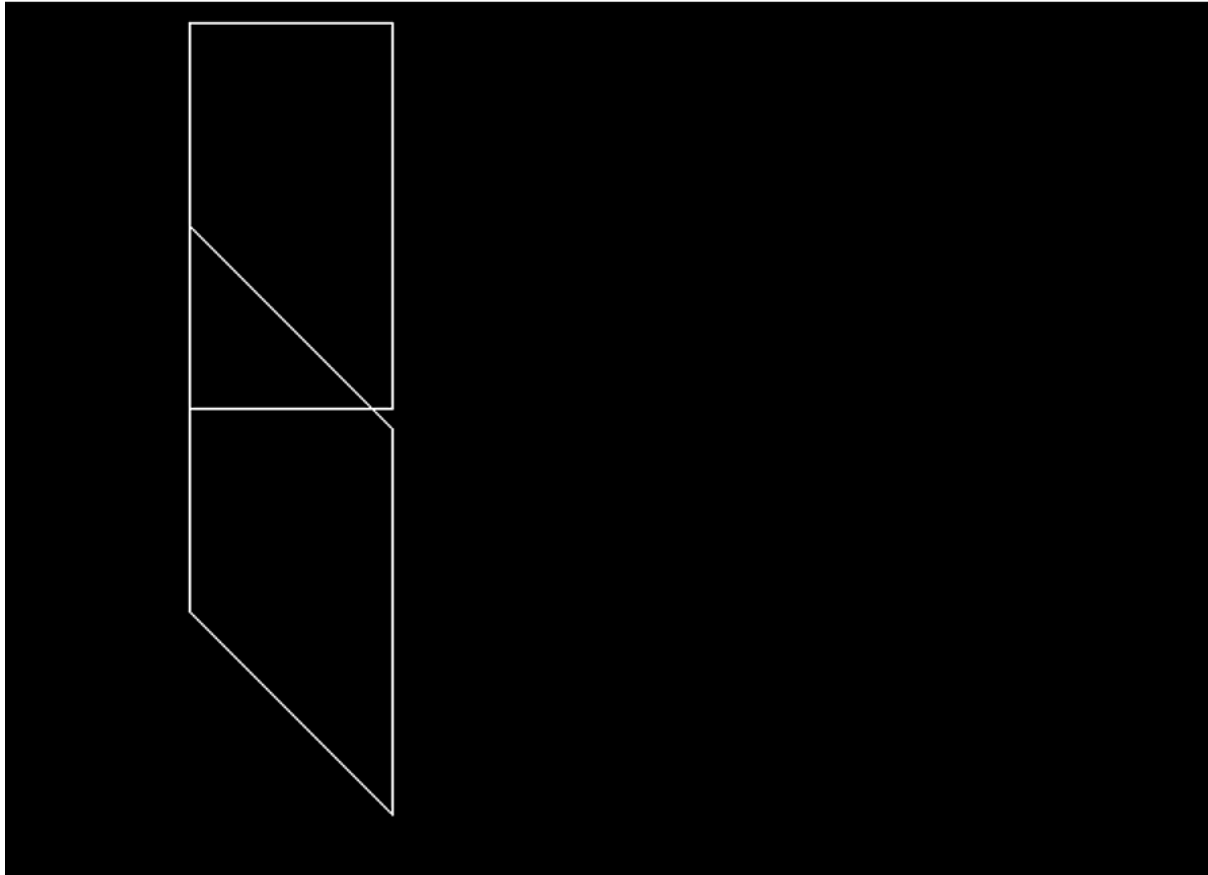
Windows BGI

Rotated Image

Original Image

OUTPUT:


```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-CG\Labs> cd "c:\
-lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32 } ; if ($?
Enter top-left coordinates(x1,y1):100 200
Enter bottom-right coordinates(x2,y2):300 300
Enter the translation distance(tx,ty):150 150
```

Windows BGI
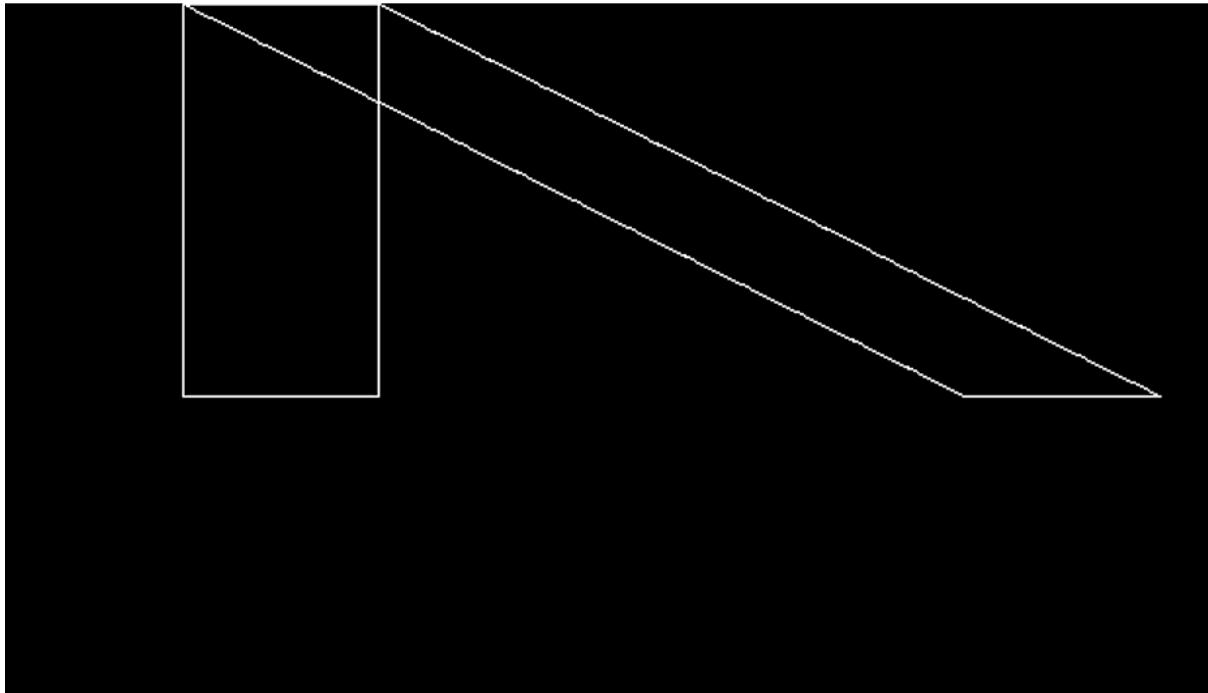

Object

Image

OUTPUT:

PS C:\Users\ASUS\OneDrive\Desktop\Paras-CG> cd "c:\Users\ASUS\OneDriv
-lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32 } ; if ($?) { .\13ii }
Enter the shear factor (shy) along the y-axis: 1

Windows BGI

OUTPUT:
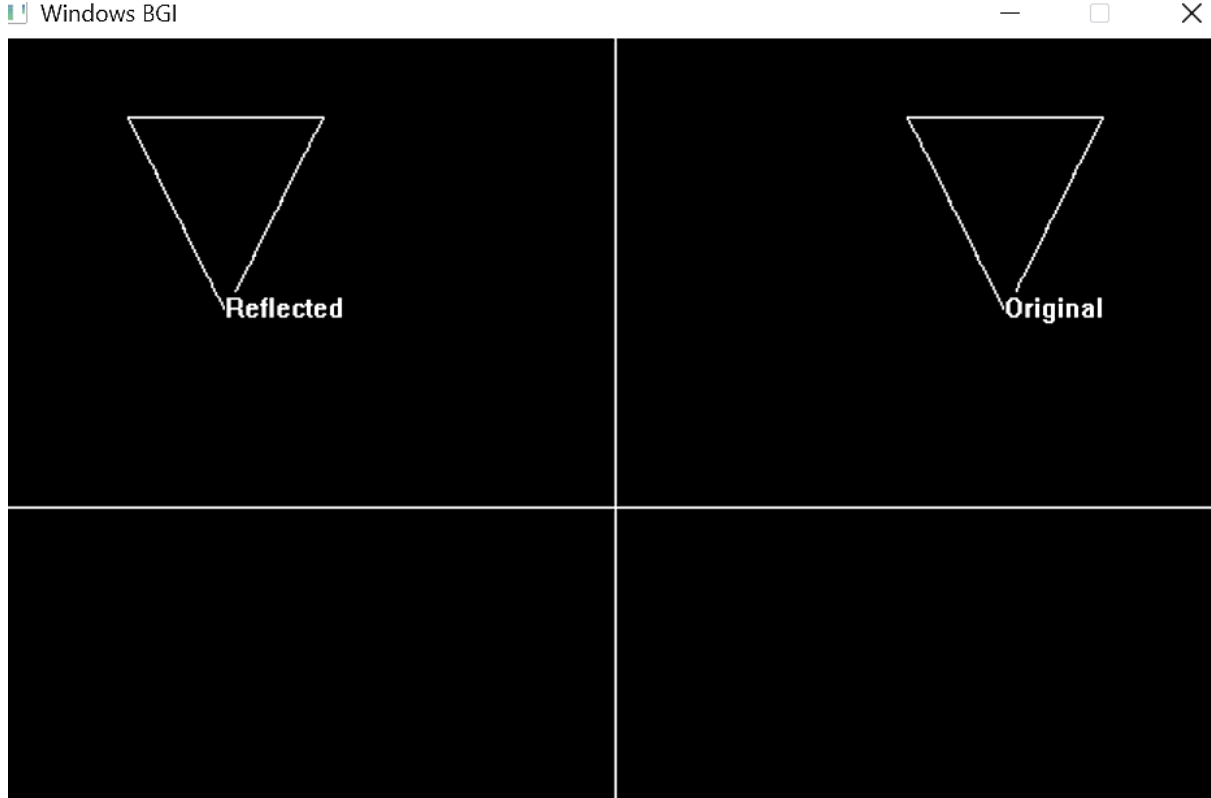


```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-CG> cd "c:\Users\ASUS\OneDrive\Deskto
-lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32 } ; if ($?) { .\12ii }
```

OUTPUT:
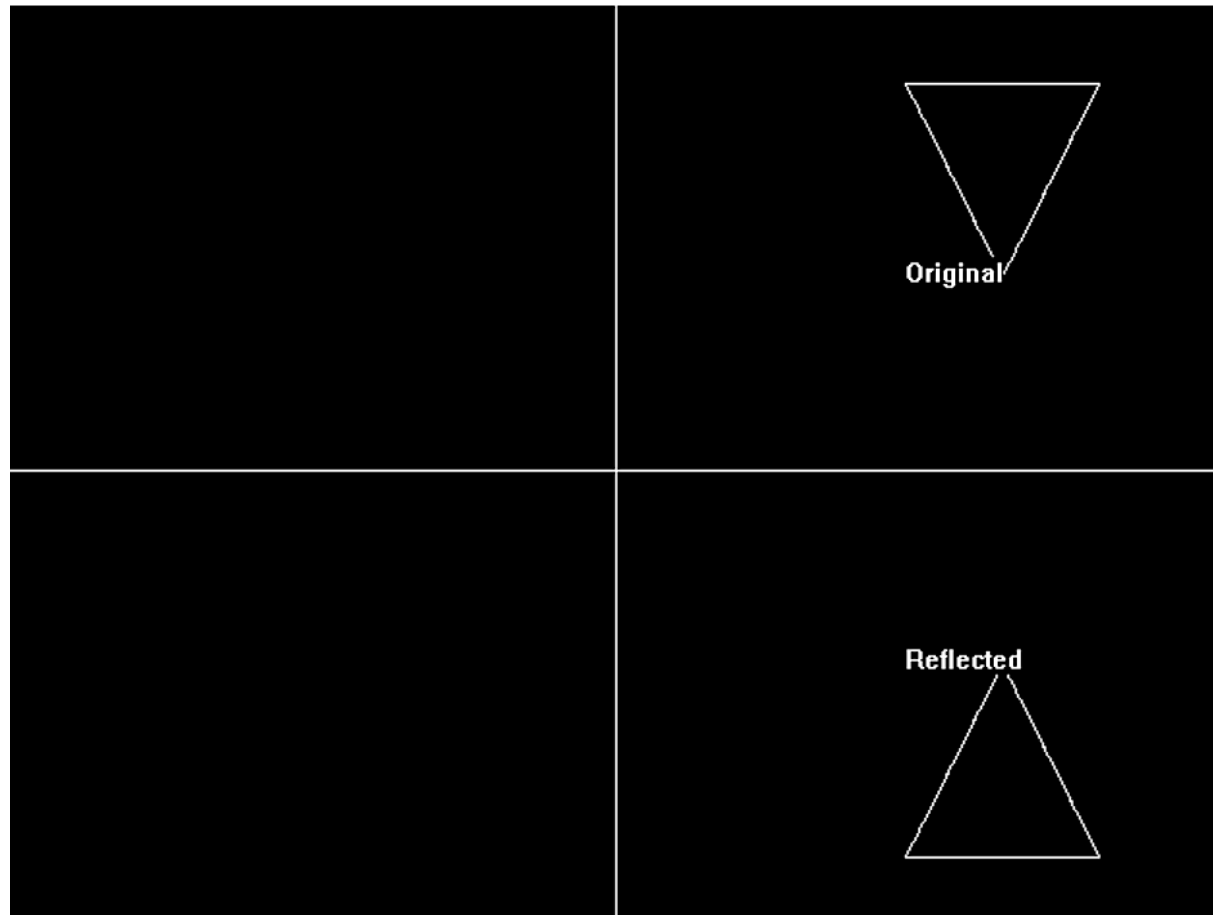


```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-CG> cd "c:\Users\ASUS\
-lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32 } ; if ($?) { .\1
Enter the y-coordinate for reflection: 250
```


Windows BGI

Original

Reflected

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\One
 } ; if ($?) { .\16 }
7        16        10
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDri
 } ; if ($?) { .\20 }
Original Customer IDs:
1034 1001 1056 1023 1045
Sorted Customer IDs (Ascending Order):
1001 1023 1034 1045 1056
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
 } ; if ($?) { .\14 }
7        12       10      16       NULL
12       NULL
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
10no } ; if ($?) { .\10no }
Enter two integers: 10 12
The GCD of 10 and 12 is: 2
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\D
 } ; if ($?) { .\24 }
Quick Sort Execution Time: 0.001000 seconds
Merge Sort Execution Time: 0.001000 seconds
Heap Sort Execution Time: 0.001000 seconds
Sorted Array (Quick Sort first 10 elements): 6 6 6 7 7 10 10 12 13 18
Sorted Array (Merge Sort first 10 elements): 6 6 6 7 7 10 10 12 13 18
Sorted Array (Heap Sort first 10 elements): 6 6 6 7 7 10 10 12 13 18
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\User
} ; if ($?) { .\19 }
Original array: 64 25 12 22 11
Sorted array: 11 12 22 25 64
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\De
 } ; if ($?) { .\12 }
Move disk 1 from A to C
Move disk 2 from A to B
Move disk 1 from C to B
Move disk 3 from A to C
Move disk 1 from B to A
Move disk 2 from B to C
Move disk 1 from A to C
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive
 } ; if ($?) { .\15 }
Doubly Linked List: 5    15        10        20
After deleting front: 15          10        20
After deleting end: 15   10
After deleting middle node: 15
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\
  } ; if ($?) { .\17 }

Stack Operations:
10 pushed to stack
20 pushed to stack
30 pushed to stack
Stack: 30 -> 20 -> 10 -> NULL
Popped element: 30
Stack: 20 -> 10 -> NULL

Queue Operations:
5 enqueued to queue
15 enqueued to queue
25 enqueued to queue
Queue: 5 -> 15 -> 25 -> NULL
Dequeued element: 5
Queue: 15 -> 25 -> NULL
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\Desktop\P
 } ; if ($?) { .\23 }
Quick Sort Execution Time: 0.001000 seconds
Merge Sort Execution Time: 0.001000 seconds
Sorted Array (Quick Sort first 10 elements): 3 5 6 7 11 19 24 31 34 35
Sorted Array (Merge Sort first 10 elements): 3 5 6 7 11 19 24 31 34 35
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
} ; if ($?) { .\22 }
Merge Sort Execution Time: 0.003000 seconds
Sorted Array (first 10 elements): 0 3 6 10 13 15 17 18 18 24
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\On
  } ; if ($?) { .\21 }
Original Array:
78 92 45 67 89 34 99 23 55 71
Sorted Array using Shell Sort:
23 34 45 55 67 71 78 89 92 99
Sorted Array using Bubble Sort:
23 34 45 55 67 71 78 89 92 99

Execution Step Comparison:
Shell Sort Steps: 16
Bubble Sort Steps: 45
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\
} ; if ($?) { .\18 }
Original array:
64 34 25 12 22 11 90
Sorted array:
11 12 22 25 34 64 90
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA\Paras-Lab> cd "c:\Users
11.c -o 11 } ; if ($?) { .\11 }
The largest element is: 9
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDr
no } ; if ($?) { .\8no }
Factorial of 5 = 120
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
  } ; if ($?) { .\13 }
 Inserted 5 at position 0.
 Inserted 15 at position 1.
 Inserted 10 at position 1.
 Inserted 20 at position 3.
 Inserted 2 at position 0.
 List elements: 2 5 10 15 20
 Deleted element at position 0.
 Deleted element at position 3.
 Deleted element at position 1.
 List elements: 5 15
 Element 15 found at position 1.
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
no } ; if ($?) { .\9no }
Enter the term (n): 5
Fibonacci series up to 5-th term:
0 1 1 2 3 5
```