## **Test case: Assignment 2**

Test case : เรียงลำดับจากน้อยไปมากของทุก sort

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2177 111173811795 ZLNBZIRHRHOEOQABXIEFATSNBTNHMQASFBYRLARMDJQKYWYYOULN ,RZVJUYEIVDDOIQEUFWSXHJQLDKFYGAGTPVJPVSFGFOSYAECWLFCF
9884 111191862716 XXZKKYPBXYNEINDNIUJMMDCCMCEGQTLJMGIJBANSATSFFHITZUVL ,PQKWWZRDDYXTTBBVKJNASFNWUDQHRFDSCLDAMPOQEYBDWWVBGPHQ
1573 111256299284 TOIEHTVNJRCDULBXJZKQXJPMREZLZITVDAJHAULBMXQCZQDIHZQS ,KBZWXKEUWUCRLOLYEPNBLMJOUMXLZCJQRINDZQCUGRKMWKJHANFK
 7974 111256657161 CNZPSTAEBWZMAFPFQXNNIJQNFJXJHPCCVHMVPBOLSULKFSIFIBPW
                                                                                      ,SPLCEUACJYEXKHILWYCNYBMGJGPANSCWODCNWAJGQVIWPNZUCUHL
 2932 111344723975 KUNSXPOCDAKBASMIEJXAFNMPBJCNXIMTLUDDZPREUUWQOYXLKIQO
                                                                                      ,DFZFMICNUHUXZMJCOENYFRFWLAZDGPJAPZMXYRVBOHSEICTCTCRT
 2036 111351662438 LBZVNWOYDRNRUQLVAWGZHBCRDCVGGTWIXYHXHJHTTXKNPRGINDSR ,GFOUNQHCDXTFMJMCMDGNZFBYVIZLIJGNBQOJUYCXDYQPHUBMPEWD
 4574 111355781996 SWGVSDOTVYUDTDKPTVWOKHYOCTQTHIUKQOALRNXZIBLGVOQLWOOH ,ZIUKANOLBHCIIPZABAPKLOELHPLIZPGBWSYNERUMNDGZTGRWRXUX
 630 111394756536 JINITRZWHOFVEFWXGTZTLMDSHPGBDUXVKIMLZFUYFWQWSDWOKNSY ,GESMCYDRPQUWHBJHXGJZOFUVSHMGFDDSDAYGIZZYYOZGNDGFBJQS
 1948 111468188266 ABXUIFZJBZHTENGDKZOJJHZAHAROJGHITCYXRJJFZHWLNTLIXXGO
                                                                                       \tt , GFXZSAJPQFBAYNNLACNRBARCYLVXBSULBVKIVBMAJXDNEOHPNKDB
    	heta
 2177 111173811795 ZLNBZIRHRHOEOQABXIEFATSNBTNHMQASFBYRLARMDJQKYWYYOULN
                                                                                     ,RZVJUYEIVDDOIQEUFWSXHJQLDKFYGAGTPVJPVSFGFOSYAECWLFCF
                                                                                     ,PQKWWZRDDYXTTBBVKJNASFNWUDQHRFDSCLDAMPOQEYBDWWVBGPHQ
,KBZWXKEUWUCRLOLYEPNBLMJOUMXLZCJQRINDZQCUGRKMWKJHANFK
9884 111191862716 XXZKKYPBXYNEINDNIUJMMDCCMCEGQTLJMGIJBANSATSFFHITZUVL
1573 111256299284 TOIEHTVNJRCDULBXJZKQXJPMREZLZITVDAJHAULBMXQCZQDIHZQS
7974 111256657161 CNZPSTAEBWZMAFPFQXNNIJQNFJXJHPCCVHMVPBOLSULKFSIFIBPW ,SPLCEUACJYEXKHILWYCNYBMGJGPANSCWODCNWAJGQVIWPNZUCUHL
2932 111344723975 KUNSXPOCDAKBASMIEJXAFNMPBJCNXIMTLUDDZPREUUWQOYXLKIQO ,DFZFMICNUHUXZMJCOENYFRFWLAZDGPJAPZMXYRVBOHSEICTCTCRT
 2036 111351662438 LBZVNWOYDRNRUQLVAWGZHBCRDCVGGTWIXYHXHJHTTXKNPRGINDSR
                                                                                     ,GFOUNQHCDXTFMJMCMDGNZFBYVIZLIJGNBQOJUYCXDYQPHUBMPEWD
 4574 111355781996 SWGVSDOTVYUDTDKPTVWOKHYOCTQTHIUKQOALRNXZIBLGVOQLWOOH
                                                                                     ,ZIUKANOLBHCIIPZABAPKLOELHPLIZPGBWSYNERUMNDGZTGRWRXUX
 630 111394756536 JINITRZWHOFVEFWXGTZTLMDSHPGBDUXVKIMLZFUYFWQWSDWOKNSY
                                                                                     ,GESMCYDRPQUWHBJHXGJZOFUVSHMGFDDSDAYGIZZYYOZGNDGFBJQS
1948 111468188266 ABXUIFZJBZHTENGDKZOJJHZAHAROJGHITCYXRJJFZHWLNTLIXXGO ,GFXZSAJPQFBAYNNLACNRBARCYLVXBSULBVKIVBMAJXDNEOHPNKDB
nd of Selectionsort testing.
nsertionsort testing time.....
                                                       Insertion Sort (Ascending)
    2177 111173811795 ZLNBZIRHRHOEOQABXIEFATSNBTNHMQASFBYRLARMDJQKYWYYOULN ,RZVJUYEIVDDOIQEUFWSXHJQLDKFYGAGTPVJPVSFGFOSYAECWLFCF
9884 111191862716 XXZKKYPBXYNEINDNIUJMMDCCMCEGQTLJMGIJBANSATSFFHITZUVL
                                                                                     , PQKWWZRDDYXTTBBVKJNASFNWUDQHRFDSCLDAMPOQEYBDWWVBGPHQ
                                                                                     , KBZWXKEUWUCRLOLYEPNBLMJOUMXLZCJQRINDZQCUGRKMWKJHANFK
1573 111256299284 TOIEHTVNJRCDULBXJZKQXJPMREZLZITVDAJHAULBMXQCZQDIHZQS
 7974 111256657161 CNZPSTAEBWZMAFPFQXNNIJQNFJXJHPCCVHMVPBOLSULKFSIFIBPW
                                                                                      ,SPLCEUACJYEXKHILWYCNYBMGJGPANSCWODCNWAJGQVIWPNZUCUHL
2932 111344723975 KUNSXPOCDAKBASMIEJXAFNMPBJCNXIMTLUDDZPREUUWQOYXLKIQO ,DFZFMICNUHUXZMJCOENYFRFWLAZDGPJAPZMXYRVBÓHSEICTCTCRT 2036 111351662438 LBZVNWOYDRNRUQLVAWGZHBCRDCVGGTWIXYHXHJHTTXKNPRGINDSR ,GFOUNQHCDXTFMJMCMDGNZFBYVIZLIJGNBQOJUYCXDYQPHUBMPEWD
4574 111355781996 SMGVSDOTVYUDTDKPTVMOKHYOCTQTHIUKQOALRNXZIBLGVOQLWOOH
630 111394756536 JINITRZWHOFVEFWXGTZTLMDSHPGBDUXVKIMLZFUYFWQWSDWOKNSY
                                                                                     ,ZIUKANOLBHCIIPZABAPKLOELHPLIZPGBWSYNERUMNDGZTGRWRXUX
                                                                                     ,GESMCYDRPQUWHBJHXGJZOFUVSHMGFDDSDAYGIZZYYOZGNDGFBJQS
 1948 111468188266 ABXUIFZJBZHTENGDKZOJJHZAHAROJGHITCYXRJJFZHWLNTLIXKGO GFZSAJPOFBRANNLACNRBARCYLVXBSULBVKIVBMAJXDNEOHPNKDB
nd of Insertionsort testing.
ubblesort testing time.....
    2177 111173811795 ZLNBZIRHRHOEOQABXIEFATSNBTNHMQASFBYRLARMDJQKYWYYOULN 9884 111191862716 XXZKKYPBXYNEINDNIUJMMDCCMCEGQTLJMGIJBANSATSFFHITZUVL
                                                                                     ,RZVJUYEIVDDOIQEUFWSXHJQLDKFYGAGTPVJPVSFGFOSYAECWLFCF
                                                                                     ,PQKWWZRDDYXTTBBVKJNASFNWUDQHRFDSCLDAMPOQEYBDWWVBGPHQ
 1573 111256299284 TOIEHTVNJRCDULBXJZKQXJPMREZLZITVDAJHAULBMXQCZQDIHZQS
                                                                                     , KBZWXKEUWUCRLOLYEPNBLMJOUMXLZCJQRINDZQCUGRKMWKJHANFK
7974 111256657161 CNZPSTAEBWZMAPPFQXNNIJQNFJXJHPCCVHMVPBOLSULKFSIFIBPW ,SPLCEUACJYEXKHILWYCNYBMGJGPANSCWODCNWAJGQYIWPNZUCUHL
2932 111344723975 KUNSXPOCDAKBASMIEJXAFNMPBJCNXIMTLUDDZPREUUWQOYXLKIQO ,DFZFMICNUHUXZMJCOENYFRFWLAZDGPJAPZMXYRVBOHSEICTCTCRT
2036 111351662438 LBZVNWOYDRNRUQLVAWGZHBCRDCVGGTWIXYHXHJHTTXKNPRGINDSR ,GFOUNQHCDXTFMJMCMDGNZFBYVIZLIJGNBQOJUYCXDYQPHUBMPEWD
4574 111355781996 SWGVSDOTVYUDTDKPTVWOKHYOCTQTHIUKQOALRNXZIBLGVOQLWOOH ,ZIUKANOLBHCIIPZABAPKLOELHPLIZPGBWSYNERUMNDGZTGRWRXUX
630 111394756536 JINITRZWHOFVEFWXGTZTLMDSHPGBDUXVKIMLZFUYFWQWSDWOKNSY ,GESMCYDRPQUWHBJHXGJZOFUVSHMGFDDSDAYGIZZYYOZGNDGFBJQS
 1948 111468188266 ABXUIFZJBZHTENGDKZOJJHZAHAROJGHITCYXRJJFZHWLNTLIXXGO
                                                                                     ,GFXZSAJPQFBAYNNLACNRBARCYLVXBSULBVKIVBMAJXDNEOHPNKDB
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## Test case : เรียงลำดับจากมากไปน้อยของทุก sort

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Scansort testing time.....
                                                 Scan Sort (Descending)
 9614 999935638771 PKVYEACGIRDDIHIVSNQSTUDIINGBYZMVRFYAQWAXAYLZZDIGNMJN ,ZFBVYRDMWIEKAKSCVTSUPJSTQLAYSENVPANVHHTSXHFCOHPHPQFD
 3351 999923652622 YNJEGMKNMXLQWTAXIFNHDZZBNFEHSJFRJPINSTYQSVWCEFNZGYGL ,LBXLVPMDVNLSCKKWMYDAOSADKXZBAPTZZXCLEPVVRNAFEZJNDJWH
 5837 999917776745 EZJEBKRJECUONVUNNHTUQOMRKUNITKCECFBJSVXXJFDXOVCSTIBW ,WREWLUSBZZLCFWAKJBHORDHDGKQAIWDRWXEVZADKBVXDIVFKNVPC
 9040 999751427723 IPXGNLCSWOSUBIOZCHVQKORTLZZYCYLQXEVZYGYBFXLUISFSPDBW ,JUKSZWKCDZDPJNNRBDHCTQKUOMVKGNWLUPQZSLHNCCBEYOWVQNQC
 6760 999644798594 HZXYQOKKYVSYFWRDGVQESZSLBDSBAMZVQBHGCBJVLHXBEUTQUTLU ,GDWSLQHIAYOYSCGDYUWZQSICFZCKGIDOSRZKEMHEIGXXTALMFFYK
 3587 999637438235 FEAZIBNEGHNUTHQJMOZGDQQSNVJIWYACOHCCIWLEIENICHDKTHBU, BIVXBPFXAEXGBZSATHTHLKFIZHHLFIZHHLFIZH
 5614 999572594287 LXKKMUCCNZRDIFHVTYIBBTUFWQUMHPRZWQPAZGKMAGBBWYWIKNYP ,KXINQMPRNIELUPZMHBDXYVBRGAKQYWBPTLKPWUUCFZPPVWWRFZXJ
  555 999566631984 QHQNWNDALDOCJYCEVMBYFYSVKCSFNUPNGICYKKEWSPCGQHKUNXYG ,XGCVTTZVTFLOVCWKMMAMZIWJPCWHDHXFRXVUTBGYWMANKDIMMPDL
 6643 999527766159 MCUDWUUUHVGEENXNHJJVFXZTMDGQXCYTIVFGCMHCOREYBTHNNCPR ,XKNWIXJOYYARJFTNKKZUCHTQDNXTYFNDOXAYUCZKJFSKHSSVOOUB
 2935 999463416692 OKVIBWGNFQSSAEHODDKHRYMXLLSLCFINEVRZIDGLWWKWXYTJZJIZ ,MMLAWCNMAVMCKUOWVEMTHCOIRFAPFGOBOWMYZTTHVLOPEDVSVAUC
nd of Scansort testing.
electionsort testing time.....
                                                Selection Sort (Descending)
 9614 999935638771 PKVYEACGIRDDIHIVSNQSTUDIINGBYZMVRFYAQWAXAYLZZDIGNMJN ,ZFBVYRDMWIEKAKSCVTSUPJSTQLAYSENVPANVHHTSXHFCOHPHPQFD
 3351 999923652622 YNJEGMKNMXLQWTAXIFNHDZZBNFEHSJFRJPINSTYQSVWCEFNZGYGL ,LBXLVPMDVNLSCKKWMYDAOSADKXZBAPTZZXCLEPVVRNAFEZJNDJWH
 5837 999917776745 EZJEBKRJECUŌNVUNNHTUQOMRKUNITKCECFBJSVXXJFDXOVCSTIBW "WREWLUSBZZLCFWAKJBHORDHDGKQAIWDRWXEVZADKBVXDIVFKNVPC
 9040 999751427723 IPXGNLCSWOSUBIOZCHVQKORTLZZYCYLQXEVZYGYBFXLUISFSPDBW ,JUKSZWKCDZDPJNNRBDHCTQKUOMVKGNWLUPQZSLHNCCBEYOWVQNQC
 6760 999644798594 HZXYQOKKYVSYFWRDGVQESZSLBDSBAMZVQBHGCBJVLHXBEUTQUTLU ,GDWSLQHIAYOYSCGDYUWZQSICFZCKGIDOSRZKEMHEIGXXTALMFFYK
 3587 999637438235 FEAZIBNEGHUNTHQJMOZGDQQSNVJIWYACOHCCIWLEIENICHDKTHBU ,BIVXBPFXAEXDBZZXXXDZTTTHLKFIZNHEIDMAEJQZCXVET
 5614 999572594287 LXKKMUCCNZRDIFHVTYIBBTUFWQUMHPRZWQPAZGKMAGBBWYWIKNYP
                                                                          ,KXINQMPRNIELUPZMHBDXYVBRGAKQYWBPTLKPWUUCFZPPVWWRFZXJ
 555 999566631984 QHQNNNDALDOCJYCEVMBYFYSVKCSFNUPNGICYKKEWSPCGQHKUNXYG ,XGCVTTZVTFLOVCWKYMAMZIWJPCWHDHXFRXVUTBGYWMANKDIMMPDL
6643 999527766159 MCUDWUUUHVGEENXNHJJVFXZTMDGQXCYTIVFGCMHCOREYBTHNNCPR ,XKNWIXJOYYARJFTNKKZUCHTQDNXTYFNDOXAYUCZKJFSKHSSVOOUB
 2935 999463416692 OKVIBWGNFQSSAEHODDKHRYMXLLSLCFINEVRZIDGLWWKWXYTJZJJZ ,MMLAWCNMAVMCKUOWVEMTHCOIRFAPFGOBOWMYZTTHVLOPEDVSVAUC
End of Selectionsort testing.
nsertionsort testing time.....
                                        ===+++ Insertion Sort (Descending)
                                                                               +++===
 9614 999935638771 PKVYEACGIRDDIHIVSNQSTUDIINGBYZMVRFYAQWAXAYLZZDIGNMJN, ZFBVYRDMWIEKAKSCVTSUPJSTQLAYSENVPANVHHXSHFCHDPHPQFD
 3351 999923652622 YNJEGMKNMXLQWTAXIFNHDZZBNFEHSJFRJPINSTYQSVWCEFNZGYGL ,LBXLVPMDVNLSCKKWMYDAOSADKXZBAPTZZXCLEPVVRNAFEZJNDJWH
 5837 999917776745 EZJEBKRJECUONVUNNHTUQOMRKUNITKCECFBJSVXXJFDXOVCSTIBW ,WREWLUSBZZLCFWAKJBHORDHDGKQAIWDRWXEVZADKBVXDIVFKNVPC
 9040 999751427723 IPXGNLCSWOSUBIOZCHVQKORTLZZYCYLQXEVZYGYBFXLUISFSPDBW ,JUKSZWKCDZDPJNNRBDHCTQKUOMVKGNWLUPQZSLHNCCBEYOWVQNQC
 6760 999644798594 HZXYQOKKYVSYFWRDGVQESZSLBDSBAMZVQBHGCBJVLHXBEUTQUTLU ,GDWSLQHIAYOYSCGDYUWZQSICFZCKGIDOSRZKEMHEIGXXTALMFFYK
 3587 999637438235 FEAZIBNEGHUNTHQJMOZGDQQSNVJIWYACOHCCIWLEIENICHDKTHBU ,BIVXBPFXAEXDBZZXKWJJWQXLDDZIFTTHLKFIZNHEIDMAEJQZCXYET
 5614 999572594287 LXKKMUCCNZRDIFHVTYIBBTUFWQUMHPRZWQPAZGKMAGBBWYWIKNYP
                                                                          ,KXINQMPRNIELUPZMHBDXYVBRGAKQYWBPTLKPWUUCFZPPVWWRFZXJ
  555 999566631984 QHQNWNDALDOCJYCEVMBYFYSVKĆSFNUPNGICYKKEWSPCGQHKUNXYG ,XGCVTTZVTFLOVCWKMMAMZIWJPCWHDHXFRXVUTBGYWMANKDIMMPDI
 6643 999527766159 MCUDWUUUHVGEENXNHJJVFXZTMDGQXCYTIVFGCMHCOREYBTHNNCPR ,XKNWIXJOYYARJFTNKKZUCHTQDNXTYFNDOXAYUCZKJFSKHSSVOOUB
 2935 999463416692 OKVIBWGNFQSSAEHODDKHRYMXLLSLCFINEVRZIDGLWWKWXYTJZJIZ ,MMLAWCNMAVMCKUOWVEMTHCOIRFAPFGOBOWMYZTTHVLOPEDVSVAUC
nd of Insertionsort testing.
Subblesort testing time.....
                                                Bubble Sort (Descending)
 9614 999935638771 PKVYEACGIRDDIHIVSNQSTUDIINGBYZMVRFYAQWAXAYLZZDIGNMJN ,ZFBVYRDMWIEKAKSCVTSUPJSTQLAYSENVPANVHHTSXHFCOHPHPQFD
 3351 999923652622 YNJEGMKNMXLQWTAXIFNHDZZBNFEHSJFRJPINSTYQSVWCEFNZGYGL ,LBXLVPMDVNLSCKKWMYDAOSADKXZBAPTZZXCLEPVVRNAFEZJNDJWH
 5837 999917776745 EZJEBKRJECUONVUNNHTUQOMRKUNITKCECFBJSVXXJFDXOVCSTIBW ,WREWLUSBZZLCFWAKJBHORDHDGKQAIWDRWXEVZADKBVXDIVFKNVPC
 9040 999751427723 IPXGNLCSWOSUBIOZCHVQKORTLZZYCYLQXEVZYGYBFXLUISFSPDBW ,JUKSZWKCDZDPJNNRBDHCTQKUOMVKGNWLUPQZSLHNCCBEYOWVQNQC
 6760 999644798594 HZXYQOKKYVSYFWRDGVQESZSLBDSBAMZVQBHGCBJVLHXBEUTQUTLU ,GDWSLQHIAYOYSCGDYUWZQSICFZCKGIDOSRZKEMHEIGXXTALMFFYK
 3587 999637438235 FEAZIBNEGHUNTHQJMOZGDQQSNVJIWYACOHCCIWLEIENICHDKTHBU, BIVXXBPFXAEXDBZXGXLDTGTTHLKFIZHNEIDMAEJQZCXVET
 5614 999572594287 LXKKMUCCNZRDIFHVTYIBBTUFWQUMHPRZWQPAZGKMAGBBWYWIKNYP ,KXINQMPRNIELUPZMHBDXYVBRGAKQYWBPTLKPWUUCFZPPVWWRFZXJ
  555 999566631984 QHQNWNDALDOCJYCEVMBYFYSVKCSFNUPNGICYKKEWSPCGQHKUNXYG ,XGCVTTZVTFLOVCWKMMAMZIWJPCWHDHXFRXVUTBGYWMANKDIMMPDL
 6643 999527766159 MCUDWUUUHVGEENXNHJJVFXZTMDGQXCYTIVFGCMHCOREYBTHNNCPR ,XKNWIXJOYYARJFTNKKZUCHTQDNXTYFNDOXAYUCZKJFSKHSSVOOUB
 2935 999463416692 OKVIBWGNFQSSAEHODDKHRYMXLLSLCFINEVRZIDGLWWKWXYTJZJIZ ,MMLAWCNMAVMCKUOWVEMTHCOIRFAPFGOBOWMYZTTHVLOPEDVSVAUC
 nd of Bubblesort testing.
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