Sample Output 1:

```
-bash-4.2$ ./search
Enter grid file name and extension (ex: input15.txt): input15.txt

Specify Sort Algorithm [1, 2, or 3]: 1

Using Selection Sort to sort the list...
Time required = 76 seconds
Grid:
n y d m k u a s l m o q y r c
u o t e u i t n m o o t w w p
e m r w t u h i d t n r m p h
g s b t d a t q k i r a a y o
d f q e h r c h f v i m u v i
d g n e m e i u b a v s p c l
q t j r q q a w d t p s b a j
s b h y s f u s o e a r e r e
o o r e n m j f t d d n s a p
y e j n a c w j o e k n b w p
v n f a k m k n c c r v r p c
d e t n e l a t r c u n k i q
z s c k q c d c n y l o t g n
s p a q n a w c g s f c i l h
h x p p i z u t w x b g m r a

Found: pos_x( 0 ), pos_y( 0 ) ⟶ north
Found: pos_x( 0 ), pos_y( 0 ) ⟶ northeast
Found: pos_x( 0 ), pos_y( 0 ) ⟶ northeaster
Found: pos_x( 0 ), pos_y( 0 ) ⟶ northeastern
Found: pos_x( 7 ), pos_y( 0 ) ⟶ student
Found: pos_x( 7 ), pos_y( 0 ) ⟶ students
Found: pos_x( 9 ), pos_y( 0 ) ⟶ motivate
Found: pos_x( 9 ), pos_y( 0 ) ⟶ motivated
Found: pos_x( 11 ), pos_y( 1 ) ⟶ trams
Found: pos_x( 4 ), pos_y( 3 ) ⟶ dents
Found: pos_x( 5 ), pos_y( 5 ) ⟶ easter
Found: pos_x( 5 ), pos_y( 5 ) ⟶ eastern
Found: pos_x( 11 ), pos_y( 5 ) ⟶ smart
Found: pos_x( 6 ), pos_y( 6 ) ⟶ aster
Found: pos_x( 6 ), pos_y( 6 ) ⟶ astern
Found: pos_x( 8 ), pos_y( 6 ) ⟶ ducat
Found: pos_x( 4 ), pos_y( 7 ) ⟶ snake
Found: pos_x( 7 ), pos_y( 7 ) ⟶ stern
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Found: pos_x( 9 ), pos_y( 7 ) ⟶ educate
Found: pos_x( 9 ), pos_y( 7 ) ⟶ educated
Found: pos_x( 7 ), pos_y( 11 ) ⟶ talent
Found: pos_x( 7 ), pos_y( 11 ) ⟶ talented
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Sample Output 2:

```
Enter grid file name and extension (ex: input15.txt): input30.txt

Specify Sort Algorithm [1, 2, or 3]: 2

Using Quick Sort to sort the list...
Time required = 0 seconds
Grid:
j f t c p m w t z v i k l o a a s q e m c v y c q t e v o z
q e q s o z v r p h c r a e s f p x a j f l e p l h n c t y
q p v d i x o e x j h j w c o n s t r u c t a i o p o a u k
m n t o n h n e s v h i b w a u c r e y w w s s i c n g q w
g t z b t r r x j y u h h v q l c d d c v t u t s r b o k j
r z i z e s l r a b e c y b i k s u f u x j d k c w j x n r
e b q w r g h r x k w u p a i t a f i b d w q q e w x o q a
v r t l q n r u t o i y z x i m b g d y z o j f m t z j q l
e z f l f a w t r l v h f n r w j s h k q q x h y d v l e i
c m x u q d i n s k a c n t j n c o k b v p t s g a w p n o
l p r d a b t o b i h h y q r i p w t e e i t a s g e i g p
o i z j k k b h p n b q v b b d y b f o r k c e x b d c r d
d w m n n h y j o u r q r n n l l c k o z q e l x f w b l s
e b r l b l w g o e y h x e l u y x g v z j j s f o u e z b
d r z r n i z e z e x i y m a h j l k u m s b g r a p h a h
l u e t g y f l z n j r m o s f a j w k s g o z y u j v v v
h k p m v o d t d n m i y z v j q r t z a a o k n o c j z v
o g t t s k m e c g q t p z v g e c b z b t l y c e z l e k
t t n e w m j s s j d k u q x l e l i f f c j v u j b c l b
h b i b w a v o l t i f b j m a v r a f f d g b f l t n v k
v t c w u b y p c q r v e b f e i b d z h g l p a o r p z r
n s z r n b f o u u o u j z s r i f u g o z i n r g o v k w
j w k v w i d i l x a i c v q z z l g d s f k e m d z y w f
o j l e y q u a u b y q d t v h l c y n d p v f a e u t s q
a m h q b i i e s y s n l m f d r y r d i m h m l s l w a z
s y l i m r m s a h j d q t x u f t z l q r p l g u r a q s
x n n y u p u e e e y f w u c a c r e b h f t j e f y u e j
i o g i f v x d j w y i t u n m h w j z u l v s h v s c n h
e l k j o h b z c x v d k t j s n f v g n s e w x e x e m w
w v j a i w d i o q n j j y z d w g w e v j r r z e l y r v

Found: pos_x( 4 ), pos_y( 0 ) ⟶ point
Found: pos_x( 4 ), pos_y( 0 ) ⟶ pointer
Found: pos_x( 18 ), pos_y( 0 ) ⟶ eared
Found: pos_x( 20 ), pos_y( 0 ) ⟶ class
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Found: pos_x( 14 ), pos_y( 1 ) ⟶ search
Found: pos_x( 4 ), pos_y( 2 ) ⟶ inter
Found: pos_x( 13 ), pos_y( 2 ) ⟶ construct
Found: pos_x( 5 ), pos_y( 5 ) ⟶ stove
Found: pos_x( 5 ), pos_y( 8 ) ⟶ array
Found: pos_x( 0 ), pos_y( 12 ) ⟶ dolce
Found: pos_x( 23 ), pos_y( 12 ) ⟶ leash
Found: pos_x( 23 ), pos_y( 14 ) ⟶ graph
Found: pos_x( 16 ), pos_y( 15 ) ⟶ algorithm
Found: pos_x( 22 ), pos_y( 15 ) ⟶ object
Found: pos_x( 3 ), pos_y( 16 ) ⟶ meres
Found: pos_x( 6 ), pos_y( 16 ) ⟶ destruct
Found: pos_x( 26 ), pos_y( 16 ) ⟶ curse
Found: pos_x( 29 ), pos_y( 16 ) ⟶ vector
Found: pos_x( 26 ), pos_y( 18 ) ⟶ blank
Found: pos_x( 25 ), pos_y( 26 ) ⟶ fused
Found: pos_x( 23 ), pos_y( 27 ) ⟶ string
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Sample Output 3:

```
Enter grid file name and extension (ex: input15.txt): input50.txt

Specify Sort Algorithm [1, 2, or 3]: 3

Using Heap Sort to sort the list...
Time required = 0 seconds
Grid:
j r z t a p z t i y f q s i b p i y n r d t w u v x v r y l u i h o j e p m e d s j f m s k a m o l
m q t n r u h a y x e q k l w s b l l j k s r s n h n t w y p m d z g o y w a i s o a d z x y w s e
z p e z h t t m m g d s n c i a g s c k d d x x x d i v c e s m v x v e t p x x b n u r a z l y q e
x i i v d n h k h p t g h h s d l q v u h f x h u v u t o o v j u n b f s a l z z o s r u r z d r l
o y a r s m m y z o z l o u s m i c o l o p g b r n q n w n i v x t x k h e y s r p i x e c c c h u
d r u w k s e n k a x t p z l u o n e e f x q o b u y t h q d m o t c u d t f n b t z u q f j r d p
x h t q l b t t t g b q x p v e i o g j m p i o n b p b l c c d v i s r l g u d z a q j l p e y e b
d l y c c k k y i y q i f g b a l w q f g p g j z a h k t j o y n h l w j b g f b d z g p w a s n h
m n y m j m h a m l v n c p u t e a r w v o t q v z t j o a y v f i l h c a q f h x y t o s y u m t
n g x r m g k r f e k n p v j e u h j f q a n z x q m s y a i q e l p g e g z a t n n s j d d v p a
y d m y m w w q l d o k x b f x n z j r t d r z q g j e x c u f a a s r a d e s f x d i i c j p w s
y y a d f n f v o i s p f d a n z j s k t f g v o w j u d t z k c s v q h p o y k w q q w a u p c k
r f v p b j p w t s f a e h i r d d h q q o i x c v r l a u c v g a q r o r t t l d r p l q x s a n
p q f h p f k a h a t k r v r s p x k z p t j u m n g t a a t q j c h a f m i d y q a q a s b z r b
q w o d q q c l e p p e y q b b h z c b c h b o p c i a t f e a a q k z q s x q p i v b z m u y b g
m y e v g a l m s h m e m v z v k p d b u s h j a q p j l k n d w f b u x c r o f z a q y b g w u d
m f y l v m q k s q k r l c h l i i h s b s n e l o j t m s l e d d i n g h l b x i j o r g d b d k
j k e i q v q x i t x e h r z r c p m q b k h t g r g y v s y p r v c a c u w x z q s i g t e w c y
f z g f p s s g q m e r a i s f h e l e z q u h n t q r c e z b y q t m s m x w e r v a g u q e e o
l c v i y f s e e l q x u l b k c h c o k a z j i k u o j r d c x q n j h o z s l m d r u r z b b q
z s e f o e p y v g x s o b t n l u u o b y i f u d t b g b k g n y s o b e a g b o z t n l x u k d
a r c v a u p b k y l u s t f h b i r h l a p q k r x e q u n w g i y m v k q a n q a z r d o l f w
f a b w o r g v j i n u m h w b z f f h y d s y k q r d s g k n h r a b o n n o j i o m s w e n i d
g i t q t h m c n r k j x h r l d h o e c i d x z q g l s v a i y r a e d b g m d l r f n l k z p o
l n v j r c z r o g q o o r h f f y a s t k p n b o e o r t v j j t v m r b q i u b r e z s v v l t
s v e x l y q b t h j w m t e h w r m h h q g l t k q m m g l h p k l v k y f w p p v g v u g k e m
h h v z m v k y u k c s a o r h w l v k a q j u d w e u x n t e u t p i s m j i y e x t r i f q m e
c e p u j g z x k x q f w u s e u v k w p d n x y d s u v z t j h d d t t i v z i s n t w d h r m i
w l m p m e p n c u v v m u n x a f k g k d z j o w o z y m s t g y o b y f z e w a d j p x h s q w
c y i f g c d z r y m m s n z m i y e y c r p p v g w z n c v t c r m a c q w g n k v u x n t g y j
s j b x q y k a d c b t d x n z a a i i x a s u b i i j q t b n n h a c r l v e k r e i o s v c z i
r x f d w t o s q w a d w c x c k b y f m z n t j v k b e l s p k k a p d g v k f v x x s n m m j q
l y z l c u c o m p z i d e p b v t h a g z o v e f d w d h l n o x z z g x d s d n u j l c v b c x
k e w l a v i z y q n o r y r l e b u c p i w a m l i r b i g o s p z t d r t u k d a f s u v a w r
b n v t w f l c s t d f k h h o i d c g d l m c n l l s b r j l w r o q b a z d l k m y j v w d x e
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g d e o d i a a e f n m x b q m b b h t x b a e m x n a e o u c m v h p y x z z v j n e e t i y p u
t i j k h q g r b t k r x d t h f u a z y i n m q a h o x a c a f g d r a x h c i m k u n k g l h g
r o x q a s h u x q l h q z y p v o f b v k e u b u g h n x t n u f j f j u b i x w b v b u j s j h
c h m n n q s d a l p v l a u r q l o k l g z e n a q i y p u o n e i g n i i k s i k v x k u f p a
w b v d j m e q s b p z y z m v i i i a s p i s v t p y y z f h u j z s o c w z c m q l v j q q z p
e x y z n f b p x u i z n w t i y m m n q c z l v t l u p d p w d j m s k k v e m z n k d y a u i l
k h n f j b k f p s m a k z a w s n d m k i g q t c r l h w n p s b x f q e n a o s c a o t b a z n
v t b r m p i w d e j s a n s s x e f c m j a x t y n u w j h u e q a k o g a z b e e r s i u d u x
v w d l q p w t l b d j p v j d a r s s n c z m u w f g f p g w h r i y j x p k r h t j v x a k f h
l w a v f k b u k c j y z l o u e y r u w u o v q g i h h g o i j z v i h p e k q c j w e s u y b b
l o c s l y a u n u l c n l t o i e l a z h h h a y k v b f n c x x z k b p u l o c k m h y c e g e
k k e n z v p s p t s y j l b l v e x m s y k s e h l t u p h z d r a c a q q i m x y d b o f y f q
o g f x c a d t v c c m g h r c s u d x c x m b e b y c v e v b k h b w s l q j u t e n f x s c l u
t e p f u j m i o b p t f u u j c e v e h u i l c q f c x k t g e j q j x m t a l j r r k t b l q p
c p n h f b y v n o p n s n o w n n a n b n j v l t u m u x z d r i v m a e p n j e z o z i u s v z

Found: pos_x( 12 ), pos_y( 0 ) ⟶ sliding
Found: pos_x( 30 ), pos_y( 1 ) ⟶ peony
Found: pos_x( 32 ), pos_y( 7 ) ⟶ nicks
Found: pos_x( 43 ), pos_y( 9 ) ⟶ sower
Found: pos_x( 9 ), pos_y( 13 ) ⟶ aside
Found: pos_x( 36 ), pos_y( 13 ) ⟶ frost
Found: pos_x( 4 ), pos_y( 16 ) ⟶ vacation
Found: pos_x( 29 ), pos_y( 16 ) ⟶ sledding
Found: pos_x( 27 ), pos_y( 18 ) ⟶ robed
Found: pos_x( 29 ), pos_y( 24 ) ⟶ tangy
Found: pos_x( 47 ), pos_y( 28 ) ⟶ shiver
Found: pos_x( 47 ), pos_y( 28 ) ⟶ shivering
Found: pos_x( 22 ), pos_y( 30 ) ⟶ snowman
Found: pos_x( 12 ), pos_y( 31 ) ⟶ winter
Found: pos_x( 11 ), pos_y( 32 ) ⟶ inter
Found: pos_x( 21 ), pos_y( 35 ) ⟶ blizzard
Found: pos_x( 4 ), pos_y( 36 ) ⟶ hovel
Found: pos_x( 5 ), pos_y( 37 ) ⟶ shove
Found: pos_x( 5 ), pos_y( 37 ) ⟶ shovel
Found: pos_x( 40 ), pos_y( 38 ) ⟶ skiing
Found: pos_x( 40 ), pos_y( 42 ) ⟶ beers
Found: pos_x( 15 ), pos_y( 47 ) ⟶ cloud
Found: pos_x( 15 ), pos_y( 47 ) ⟶ clouds
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