

Laporan Tugas Kecil 1 IF2211 Strategi Algoritma

Penyelesaian *Word Search Puzzle* dengan Algoritma *Brute Force*

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A. Algoritma Brute force

Algoritma brute force singkatnya ialah cara penyelesaian masalah dengan program yang meninjau semua kasus yang mungkin muncul berdasarkan deskripsi masalah yang diberikan.

Ada banyak approach dalam menyelesaikan suatu masalah dengan algoritma brute force, karena meskipun tujuan akhirnya sama, dalam mencapai tujuan akhir tersebut ada banyak cara yang bisa diambil. Algoritma yang saya gunakan terdiri atas beberapa tahap diantaranya **Pembacaan File**, **Pencarian Jawaban**, Serta **Output**.

Pembacaan File

Pada tahap pembacaan file yang ada pada class *IO* dengan nama method yaitu *textToPuzzle*, Program membaca input baris demi baris lalu diubah kedalam Array of Array of character yang ada pada class *Puzzle* bernama puzzle.

```
J S O L U T I S  
S U N A R U U A  
N E P T U N E T  
S O N I E I S U  
R C E V T R E R  
A H T R A E S N  
M M E R C U R Y
```

```
EARTH  
JUPITER  
MARS  
MERCURY  
NEPTUNE  
SATURN  
URANUS  
VENUS
```

Misalkan program diberikan input seperti tabel di atas, maka program akan membaca `J S O L U T I S` lalu akan dibuat menjadi array of character dengan menghilangkan spasi yang ada. Jika program menemukan 1 baris yang hanya berisi "" maka proses ekstraksi bentuk puzzle kedalam array of array of character tersebut telah selesai dilakukan.

Selanjutnya adalah proses ekstraksi list kata yang tersedia pada puzzle, Proses ini tidak jauh berbeda dengan sebelumnya namun pada kali ini setiap baris akan dibaca sebagai sebuah string yang nantinya kumpulan kata tersebut akan ditampung pada sebuah array of string.

Pada tahap ini juga dibuat sebuah array of array of integer dengan nilai -1 yang besarnya sama persis dengan besar puzzle pada teks. Array ini digunakan untuk menyimpan kode warna yang nantinya akan digunakan untuk output.

Pencarian Jawaban

Pada tahap pencarian jawaban saya buat pada class *Solver*, algoritma yang saya gunakan ialah pattern matching yaitu setiap karakter akan di cek apakah karakter yang ada pada suatu kata ada pada puzzle tersebut atau tidak. Jika tidak ada maka pencarian terus dilakukan hingga ditemukan huruf yang cocok dengan kata tersebut. Jika huruf pertama sudah cocok maka akan dilakukan pencarian huruf selanjutnya secara melingkar atau pencarian secara delapan arah mata angin yang berbeda mulai dari utara hingga kembali ke utara sesuai dengan arah jarum jam. Jika masih belum ditemukan maka proses pencarian akan kembali pada tahap pencocokan huruf pertama pada suatu kata.

```
JSOLUTIS
SUNARUUA
NEPTUNET
SONIEISU
RCEVTRER
AHTRAESN
MMERCURY

EARTH
```

Misalkan kita akan mencari kata EARTH, program berjalan dari baris pertama untuk melakukan pengecekan apakah terdapat huruf `E` pada baris tersebut, jika masih belum ditemukan maka program akan lanjut mencari untuk baris selanjutnya. Misalkan huruf `E` ditemukan pada baris 3 Kolom 2, maka akan dilakukan pengecekan sesuai arah mata angin dari utara hingga kembali lagi ke utara sesuai dengan arah jarum jam. Program akan membandingkan huruf A dengan U, jika tidak cocok maka arah akan diganti dan *counter* akan di reset kembali ke 1. *Counter* berfungsi untuk menghitung berapa banyak kata yang cocok, jika banyak nya kata yang cocok sesuai dengan panjang hurufnya maka solusi ditemukan. Jika tidak maka akan dicari sesuai arah mata angin berikutnya. Misalnya setelah pencarian delapan arah mata angin

yang berbeda solusi masih belum ditemukan, maka program akan kembali ke tahap pencocokan huruf pertama dan proses ini dilakukan secara berulang hingga semua kata berhasil ditemukan solusinya pada puzzle.

Jika sebuah kata ditemukan solusinya, maka banyaknya perbandingan yang dilakukan akan disimpan pada array *result* dan array of array of integer *colorCodes* yang mulanya berisi -1 pada setiap baris dan kolom akan di update berdasarkan solusi yang ditemukan.

Output

Pada tahap ini kata yang ditemukan akan di cetak berwarna sesuai urutan warna yang ada pada class *ConsoleColor* serta sesuai nilai yang ada pada array of array of integer *colorCodes* pada class *Puzzle*.

Nilai yang dimasukkan kedalam *colorCodes* ialah kode warna yang sudah didefinisikan pada class *ConsoleColor*. Element dengan nilai nol memiliki warna merah, nilai satu memiliki warna hijau dan seterusnya. Proses format *output* sudah dikemas pada class *puzzle* yaitu pada method *displayPuzzle*.

Proses pencetakan warna memiliki alur sebagai berikut. Program akan mengecek apakah element *colorCodes* memiliki nilai selain -1, jika iya maka akan di output warna yang sebelumnya telah didefinisikan. Jika element *colorCodes* adalah -1 maka cetak seperti biasa.

B. Source Code Program

Program yang saya buat terdiri dari 1 file yaitu *Wordpuzzle.java* di dalam file tersebut terdapat 4 class diantaranya *ConsoleColor*, *Puzzle*, *IO*, dan *Solver*.

Console Color

```
public static class ConsoleColor {
    private static final String RESET = "\033[0m";
    private static final String RED = "\033[0;31m";
    private static final String GREEN = "\033[0;32m";
    private static final String YELLOW = "\033[0;33m";
    private static final String BLUE = "\033[0;34m";
    private static final String PURPLE = "\033[0;35m";
    private static final String CYAN = "\033[0;36m";
    private static final String RED_BOLD = "\033[1;31m";
    private static final String GREEN_BOLD = "\033[1;32m";
    private static final String YELLOW_BOLD = "\033[1;33m";
    private static final String BLUE_BOLD = "\033[1;34m";
    private static final String PURPLE_BOLD = "\033[1;35m";
```

```
private static final String CYAN_BOLD = "\033[1;36m";

public static void formatText(Character text, int number) {
    String[] colors = {
        RED,
        GREEN,
        YELLOW,
        BLUE,
        PURPLE,
        CYAN,
        RED_BOLD,
        GREEN_BOLD,
        YELLOW_BOLD,
        BLUE_BOLD,
        PURPLE_BOLD,
        CYAN_BOLD,
    };
    System.out.print(colors[number] + text + RESET);
}

public static void formatString(String text, int number) {
    String[] colors = {
        RED,
        GREEN,
        YELLOW,
        BLUE,
        PURPLE,
        CYAN,
        RED_BOLD,
        GREEN_BOLD,
        YELLOW_BOLD,
        BLUE_BOLD,
        PURPLE_BOLD,
        CYAN_BOLD,
    };
    System.out.print(colors[number] + text + RESET);
}
}
```

Puzzle

```
public static class Puzzle {
    private ArrayList<ArrayList<Character>> puzzle = new
ArrayList<ArrayList<Character>>();
    private ArrayList<ArrayList<Integer>> colorCodes = new
ArrayList<ArrayList<Integer>>();
    private ArrayList<String> WordList = new ArrayList<String>();

    public void displayWordList() {
        try {
            for (int index = 0; index < this.WordList.size(); index++) {
                System.out.print(this.WordList.get(index));
                if (index != this.WordList.size() - 1) {
                    System.out.print(" ");
                }
            }
        } catch (Exception err) {
            err.printStackTrace();
        }
    }

    public void displayPuzzle() {
        try {
            for (int row = 0; row < this.puzzle.size(); row++) {
                for (int col = 0; col < this.puzzle.get(row).size(); col++) {
                    int currentColor = this.colorCodes.get(row).get(col);
                    char currentChar = this.puzzle.get(row).get(col);
                    if (currentColor != -1) {
                        ConsoleColor.formatText(currentChar, currentColor);
                    } else {
                        System.out.print(currentChar);
                    }

                    if (col != this.puzzle.get(row).size() - 1) {
                        System.out.print(" ");
                    }
                }
                System.out.println("");
            }
        } catch (Exception err) {
            err.printStackTrace();
        }
    }

    public void displayColorCodes() {
        try {
            for (int row = 0; row < this.colorCodes.size(); row++) {
                for (int col = 0; col < this.colorCodes.get(row).size(); col++) {
                    {
```

```

        System.out.print(this.colorCodes.get(row).get(col));
        if (col != this.colorCodes.get(row).size() - 1) {
            System.out.print(" ");
        }
    }
    System.out.println("");
}
} catch (Exception err) {
    err.printStackTrace();
}
}
}

```

IO

```

public static class IO {
    public static String menu() {
        System.out.println("Welcome to word-puzzle solver");
        System.out.println(
            "To get started, put the file in the test directory. Make sure
the format is correct otherwise it won't work");
        System.out.println("What do you wan't to do? (Please select the
number ex: 2)");
        System.out.println("1. Use ");
        System.out.println("2. Exit");
        System.out.print("Select the number: ");
        Scanner scan = new Scanner(System.in);
        int choice = scan.nextInt();
        System.out.println("=====");
        if (choice == 2) {
            System.out.println("Thank you for using word-puzzle solver!");
            scan.close();
            System.exit(0);
        } else if (choice == 1) {
            System.out.println("Please select file that you wan't to use");
            printListDir();
            System.out.print("Select the number: ");
            choice = scan.nextInt();
            while (choice > getListDir().length) {
                System.out.print("Select the number: ");
                choice = scan.nextInt();
            }
            scan.close();
        }
        return getListDir()[choice - 1].getName();
    }
}

```

```

public static File[] getListDir() {
    File currentDirectory = new File("../test");
    File[] listFiles = currentDirectory.listFiles();
    return listFiles;
}

public static void printListDir() {
    File[] listFiles = getListDir();
    if (listFiles != null) {
        for (int i = 0; i < listFiles.length; i++) {
            System.out.println(String.format("%d. %s", i + 1,
listFiles[i].getName()));
        }
    } else {
        System.out.println("Direktori Folder Kosong");
    }
}

public static Puzzle textToPuzzle(String fileName) {
    Puzzle puzzle = new Puzzle();
    try {
        FileReader reader = new FileReader(String.format("../test/%s",
fileName));
        BufferedReader bufferedReader = new BufferedReader(reader);
        String line = bufferedReader.readLine();
        while (line.length() != 0) {
            char[] lines = line.replaceAll("\\W", "").toCharArray();
            ArrayList<Character> row = new ArrayList<Character>();
            ArrayList<Integer> rowInt = new ArrayList<Integer>();
            for (int i = 0; i < lines.length; i++) {
                row.add(lines[i]);
                rowInt.add(-1);
            }
            puzzle.puzzle.add(row);
            puzzle.colorCodes.add(rowInt);
            line = bufferedReader.readLine();
        }
        while ((line = bufferedReader.readLine()) != null) {
            puzzle.WordList.add(line);
        }
        reader.close();
    } catch (IOException e) {
        e.printStackTrace();
    }
    return puzzle;
}
}

```

Solver

```
public static class Solver {  
  
    // 8 direction  
    private int[] x = { -1, -1, 0, 1, 1, 1, 0, -1 };  
    private int[] y = { 0, 1, 1, 1, 0, -1, -1, -1 };  
    private ArrayList<Integer> result = new ArrayList<Integer>();  
  
    Puzzle puzzle = new Puzzle();  
  
    public Solver(String fileName) {  
        puzzle = IO.textToPuzzle(fileName);  
    }  
  
    public void solvePuzzle() {  
        long startTime = System.nanoTime();  
        int wordCount = 0;  
        int comparison = 0;  
        int tempVar = 0;  
        for (String word : puzzle.WordList) {  
            int localComparison = 0;  
            boolean found = false;  
            for (int row = 0; row < puzzle.puzzle.size(); row++) {  
                for (int col = 0; col < puzzle.puzzle.get(row).size(); col++) {  
                    localComparison++;  
                    comparison++;  
                    if (word.charAt(0) == puzzle.puzzle.get(row).get(col)) {  
                        int counter = 1;  
                        int dir = 0;  
                        int multiplier = 1;  
                        while (dir != 8 || counter == word.length()) {  
                            try {  
                                char currentChar = puzzle.puzzle.get(row + multiplier *  
x[dir]).get(col + multiplier * y[dir]);  
                                localComparison++;  
                                comparison++;  
                                if (currentChar == word.charAt(counter)) {  
                                    multiplier++;  
                                    counter++;  
                                    if (counter == word.length()) {  
                                        for (int i = 0; i < word.length(); i++) {  
                                            puzzle.colorCodes.get(row + i * x[dir]).set(col +  
i * y[dir], wordCount % 12);  
                                        }  
                                        tempVar = localComparison;  
                                        found = true;  
                                        wordCount++;  
                                        break;  
                                    }  
                                } else {
```



```

        counter = 1;
        multiplier = 1;
        dir++;
    }
} catch (Exception err) {
    counter = 1;
    multiplier = 1;
    dir++;
}
}
}
if (found) {
    break;
}
}
if (found) {
    break;
}
}
if (found) {
    this.result.add(tempVar);
} else {
    this.result.add(-1);
}
}
long endTime = System.nanoTime();
double time = (double) (endTime - startTime) / 1000000;
System.out.println("=====");
System.out.println();
System.out.println("Your puzzle has been solved");
System.out.println("Here's the result:");
System.out.println();
puzzle.displayPuzzle();
System.out.println("=====");
System.out.println(String.format("Word found (%d/%d): ", wordCount,
puzzle.WordList.size()));
for (int i = 0; i < puzzle.WordList.size(); i++) {
    int color = result.get(i);
    ConsoleColor.formatString(puzzle.WordList.get(i), i % 12);
    if (color != -1) {
        System.out.println(String.format(": %d comparison", color));
    } else {
        System.out.println(String.format(": NOT FOUND"));
    }
}
System.out.println("=====");
System.out.println(String.format("Time taken: %f ms", time));
System.out.println(String.format("Total Comparison: %d comparison
had been done", comparison));
System.out.println("Thank you for using word-puzzle solver!");

```

```
}  
}
```

Main

```
public static void main(String[] args) {  
    Solver solve = new Solver(IO.menu());  
    solve.solvePuzzle();  
}
```

C. Screenshot Input dan Ouput

1. Small (14 x 14)

```
L N O S N I T S E T L A L A  
M T S M N A E S T E B E R R  
S L P A R T K N L A M E L I  
L G R R B A I I I C N R R A  
A N E S A S A R S H T I E E  
W I S H R S E O M E H K Y L  
Y V E A N B T B A R L S A B  
E I N L E T D I N B I E E M  
R G T L Y R E N H A L N O A  
W S E Y E A O D A N Y S G L  
A P R Y E R P R T A B O W D  
P A N R B W R I T Y M T L R  
B L N A A P M P A A B R I I  
G S E L D A N E N E Y R E N
```

```
MARSHALL  
MANHATTAN  
MOSBY  
TED  
TEACHER  
SLAPSGIVING  
BARNEY  
LAWYER  
LILY  
ERIKSEN  
STINSON  
PRESENTER  
ALDRIN  
ROBIN
```

Your puzzle has been solved
Here's the result:

```
L N O S N I T S E T L A L A  
M T S M N A E S T E B E R R  
S L P A R T K N L A M E L I  
L G R R B A I I I C N R R A  
A N E S A S A R S H T I E E  
W I S H R S E O M E H K Y L  
Y V E A N B T B A R L S A B  
E I N L E T D I N B I E E M  
R G T L Y R E N H A L N O A  
W S E Y E A O D A N Y S G L  
A P R Y E R P R T A B O W D  
P A N R B W R I T Y M T L R  
B L N A A P M P A A B R I I  
G S E L D A N E N E Y R E N
```

```
=====
```

Word found (14/14):
MARSHALL: 34 comparison
MANHATTAN: 114 comparison
MOSBY: 148 comparison
TED: 166 comparison
TEACHER: 24 comparison
SLAPSGIVING: 296 comparison
BARNEY: 66 comparison
LAWYER: 92 comparison
LILY: 151 comparison
ERIKSEN: 82 comparison
STINSON: 24 comparison
PRESENTER: 44 comparison
ALDRIN: 238 comparison
ROBIN: 125 comparison

```
=====
```

Time taken: 11.413200 ms
Total Comparison: 1604 comparison had been done
Thank you for using word-puzzle solver!

2. Small (18 x 16)

```
P F D C A D Z P S O Y M A P R B
Z D I O C N X O P I M A N N C Z
E R M O Y E N I J F V A I Y M Z
V Z O U N F O M K R U M V T T H
L W I W K Y Z Z F D H O V L Q N
W O V Q S I S X K R E J G A K F
Q J L A J B J R F I N E O B I J
W K Q L Q J R J Z Y Z S C L J W
M J I O W E P C F C C G I E P V
F X X Y C C I Q Y I M E G O B S
F M U Z I X T D D J O U N C F S
X X R G R R E E T C T N P B M P
X S K W T G C P B A X B T C B W
A Y Q T K X P A Y S I G G Q J K
C N S B J W P B B V W B G D S O
J Q P P J B Q A W T P P Q F Z P
J K E E H Z S K B I X W Z L B L
K B J H P N O B Q W V N G K V E
```

```
JRFINEO
GBWVBBP
SGEUNBGB
XJKJOWZ
RWKWQKQ
LVAMO
QBYAT
PWJEJ
```

Your puzzle has been solved
Here's the result:

```
P F D C A D Z P S O Y M A P R B
Z D I O C N X O P I M A N N C Z
E R M O Y E N I J F V A I Y M Z
V Z O U N F O M K R U M V T T H
L W I W K Y Z Z F D H O V L Q N
W O V Q S I S X K R E J G A K F
Q J L A J B J R F I N E O B I J
W K Q L Q J R J Z Y Z S C L J W
M J I O W E P C F C C G I E P V
F X X Y C C I Q Y I M E G O B S
F M U Z I X T D D J O U N C F S
X X R G R R E E T C T N P B M P
X S K W T G C P B A X B T C B W
A Y Q T K X P A Y S I G G Q J K
C N S B J W P B B V W B G D S O
J Q P P J B Q A W T P P Q F Z P
J K E E H Z S K B I X W Z L B L
K B J H P N O B Q W V N G K V E
```

Word found (8/8):

```
JRFINEO: 144 comparison
GBWVBBP: 310 comparison
SGEUNBGB: 156 comparison
XJKJOWZ: 169 comparison
RWKWQKQ: 233 comparison
LVAMO: 96 comparison
QBYAT: 324 comparison
PWJEJ: 283 comparison
```

Time taken: 3.299800 ms

Total Comparison: 1715 comparison had been done
Thank you for using word-puzzle solver!

3. Small (15 x 15)

```
R Z H W I A J W V Z Z V U C S
B E S U X B C C C Z R X X P P
R G D E N B T N E E A G C F K
E Y G I K T L C K B O U N T Y
W W V R R K E E K R O T P M B
M G E X B T E R C E M O F X R
A Y N M Q S A M A T B M X W O
S K P T D O I B B S A J U X O
T I X O L X C V E A Y O B G D
E V O W F R T B L M X W M T M
R L B Q H J A M T T E N A B O
B W I I J X M K S S X C T G T
M Q W Y E X U P I A F W G J H
K Q P L H C U E R E P P V B E
H V X O R G H Q B B E W U O R
```

```
AXE
BANE
BATRIDER
BEASTMASTER
BLOODSEEKER
BOUNTY
HUNTER
BREWMASTER
BRISTLEBACK
BROODMOTHER
```

Your puzzle has been solved
Here's the result:

```
R Z H W I A J W V Z Z V U C S
B E S U X B C C C Z R X X P P
R G D E N B T N E E A G C F K
E Y G I K T L C K B O U N T Y
W W V R R K E E K R O T P M B
M G E X B T E R C E M O F X R
A Y N M Q S A M A T B M X W O
S K P T D O I B B S A J U X O
T I X O L X C V E A Y O B G D
E V O W F R T B L M X W M T M
R L B Q H J A M T T E N A B O
B W I I J X M K S S X C T G T
M Q W Y E X U P I A F W G J H
K Q P L H C U E R E P P V B E
H V X O R G H Q B B E W U O R
```

Word found (10/10):

```
AXE: 11 comparison
BANE: 270 comparison
BATRIDER: 180 comparison
BEASTMASTER: 355 comparison
BLOODSEEKER: 278 comparison
BOUNTY: 83 comparison
HUNTER: 9 comparison
BREWMASTER: 29 comparison
BRISTLEBACK: 346 comparison
BROODMOTHER: 117 comparison
```

Time taken: 6.979400 ms

Total Comparison: 1678 comparison had been done
Thank you for using word-puzzle solver!

4. Medium (20 x 22)

KSJJKXIKPPALARMCLOCKIBF
AORNHEAJMAWLUWAAYGCKWY
YNPETXSJAWYNSZQVFBIDNO
NHRPPJAYLZRNXNUTWNDXMDZ
CYIOEPCVPYSJYMZFSIVFKT
MOAUBZINWODGNISSERDVDE
DJMCMENLQCNPRPTMGOFRAS
XHRFAKBRSXHXEPXJPNPEPYO
KLTMOUBYOLONMQKRASQPAL
NVYKXRYYLRAOCLHSBJGMC
TARBUQTJFROTSEEEOESYR
YSYHDSWECEZIERPNTIDMZ
PNZOUSWBRWINMFJVQFODAR
DIKTVSQLEHLYASGXQLHAO
OAWETELEVISONZGGLDEPR
OTUTTVDUOMSWINDOWSDRHT
RRRERVKEKKLKSQJTKOUSZS
WUJTEDDYBEAREESYAGPYTR
NCNLGVUPTNSADYSLYQZQZP
VSRHZALQTHGILONYNVAHIP

BED
CLOSET
DOOR
DUVET
FAN
LAMP
LIGHT
MIRROR
PHOTO
PILLOWS
RADIO
REMOTE
ROBE
RUG
SHELF
ALARMCLOCK
COMFORTER
CURTAINS
DRESSER
DRESSINGDOWN
SLIPPERS
TEDDYBEAR
TELEVISION
WINDOWS

KSJJKXIKPPALARMCLOCKIBF
AORNHEAJMAWLUWAAYGCKWY
YNPETXSJAWYNSZQVFBIDNO
NHRPPJAYLZRNXNUTWNDXMDZ
CYIOEPCVPYSJYMZFSIVFKT
MOAUBZINWODGNISSERDVDE
DJMCMENLQCNPRPTMGOFRAS
XHRFAKBRSXHXEPXJPNPEPYO
KLTMOUBYOLONMQKRASQPAL
NVYKXRYYLRAOCLHSBJGMC
TARBUQTJFROTSEEEOESYR
YSYHDSWECEZIERPNTIDMZ
PNZOUSWBRWINMFJVQFODAR
DIKTVSQLEHLYASGXQLHAO
OAWETELEVISONZGGLDEPR
OTUTTVDUOMSWINDOWSDRHT
RRRERVKEKKLKSQJTKOUSZS
WUJTEDDYBEAREESYAGPYTR
NCNLGVUPTNSADYSLYQZQZP
VSRHZALQTHGILONYNVAHIP

Word found (24/24):
BED: 261 comparison
CLOSET: 283 comparison
DOOR: 377 comparison
DUVET: 309 comparison
FAN: 278 comparison
LAMP: 101 comparison
LIGHT: 583 comparison
MIRROR: 381 comparison
PHOTO: 453 comparison
PILLOWS: 288 comparison
RADIO: 490 comparison
REMOTE: 194 comparison
ROBE: 89 comparison
RUG: 508 comparison
SHELF: 572 comparison
ALARMCLOCK: 19 comparison
COMFORTER: 119 comparison
CURTAINS: 474 comparison
DRESSER: 187 comparison
DRESSINGDOWN: 179 comparison
SLIPPERS: 237 comparison
TEDDYBEAR: 524 comparison
TELEVISION: 407 comparison
WINDOWS: 434 comparison

Time taken: 15.145100 ms
Total Comparison: 7667 comparison had been done
Thank you for using word-puzzle solver!

5. Medium (22 x 20)

IMBEOQRGVYWZCSZIJWNZ
JWMQEGAXXJQZXKMIIXQA
HAKMZKKWVAJKKBPQRGRZ
IYEBGIFMRUFUDREFORLNL
DAPCWSSTPLDRTOFLDJGRD
QJBGJSSEDRFTPCSATVGOP
YVJXQQESLQMJJZKOPDSSU
WDQYTBZZQLBEZBHTVVYC
VZCBSFEEIFHFJJSQYIZAM
VAOTWLDWMZJFKOSCUIQK
ZANFGXFZVSYKWQPGBOUH
XGXUYUVJUFANYNKIRORUB
MVDAPHKQCSNLPMMQMNFY
FPTVOFJCVBODOJWTEIIK
KETXRHVUOHMPVXFVRUGRB
NDWBTTHHUCPMYRTBQIOI
XQAQUHUINXUDXKMYFAHY
KZKMCUDUXHRCNZJNAGMJS
CXTYEMQGMOWKOYGGJQRHP
CRDTHYCXJZJXSNNRTZRR
BIMIRICFTRRIXFDMKPL
STHKMTINWONVUAZDEMND

SEDRFTPC
JODOBVCJF
TSWGUHO
UIVDVJR
BWSEIZ
TXOL
RHMUIU
XYDCOJ

Your puzzle has been solved
Here's the result:

IMBEOQRGVYWZCSZIJWNZ
JWMQEGAXXJQZXKMIIXQA
HAKMZKKWVAJKKBPQRGRZ
IYEBGIFMRUFUDREFORLNL
DAPCWSSTPLDRTOFLDJGRD
QJBGJSSEDRFTPCSATVGOP
YVJXQQESLQMJJZKOPDSSU
WDQYTBZZQLBEZBHTVVYC
VZCBSFEEIFHFJJSQYIZAM
VAOTWLDWMZJFKOSCUIQK
ZANFGXFZVSYKWQPGBOUH
XGXUYUVJUFANYNKIRORUB
MVDAPHKQCSNLPMMQMNFY
FPTVOFJCVBODOJWTEIIK
KETXRHVUOHMPVXFVRUGRB
NDWBTTHHUCPMYRTBQIOI
XQAQUHUINXUDXKMYFAHY
KZKMCUDUXHRCNZJNAGMJS
CXTYEMQGMOWKOYGGJQRHP
CRDTHYCXJZJXSNNRTZRR
BIMIRICFTRRIXFDMKPL
STHKMTINWONVUAZDEMND

Word found (8/8):
SEDRFTPC: 129 comparison
JODOBVCJF: 388 comparison
TSWGUHO: 190 comparison
UIVDVJR: 216 comparison
BWSEIZ: 87 comparison
TXOL: 417 comparison
RHMUIU: 587 comparison
XYDCOJ: 375 comparison

Time taken: 2.466900 ms
Total Comparison: 2389 comparison had been done
Thank you for using word-puzzle solver!

6. Medium (24 x 22)

```
CBWFVEYLA XOHIGMGVQQAXI
PKJFDGGQE BBUIMMDH MJVHI
ILKXIMBXE ICLJQNKY NDFJM
CSDSWPHWJ WXOCLMGCVLYOF
YUDZXMKBM FOVXPBCKPJGGG
TRHUIOXDE KVIIBM CVUTJIH
PERQVLEOK BWTNHLZP WMMQG
HGKUWIAZO SOCJLETEGOWFR
KUMYYPPYWX NMHYHVL SUFKSQ
VYNAUSXL USWYGPJEFWIAGC
WISWDUUPUL XJTIERFECKZH
IZLNIJFG MPQGMWSZSJJDMAW
JEIBTFRKP JCFTJPLJHMTZM
LEEJQLHLA QAQEXEQUZFJTJ
CDHDSOZHBNLPZIJOE VXXQH
FTRERLFAUMVWGQXRCROYUJ
AZERKIJAXCCEKVOCIRCNFP
ZWOUMHHRSCQIEVCXLIYTM
CAHBCNRTFBIKCSRPPAJBXB
AFLNUDTSOUWVEYAFHMGKEB
RGHFGUXGZBUOGKYLZOZKMR
YAOUQSRLTELIXLTIMOC PDN
YXDQP LBDQYZLRRMGYZS XAW
RRXPQDTWNB AHJWJWOHPDXV
```

```
TIMOCPDN
QEXEQAQ
GEVJEZPE
PLWZODB
BQOFAR
DKGAX
FHAJGJ
CRYGIZB
```

Your puzzle has been solved
Here's the result:

```
CBWFVEYLA XOHIGMGVQQAXI
PKJFDGGQE BBUIMMDH MJVHI
ILKXIMBXE ICLJQNKY NDFJM
CSDSWPHWJ WXOCLMGCVLYOF
YUDZXMKBM FOVXPBCKPJGGG
TRHUIOXDE KVIIBM CVUTJIH
PERQVLEOK BWTNHLZP WMMQG
HGKUWIAZO SOCJLETEGOWFR
KUMYYPPYWX NMHYHVL SUFKSQ
VYNAUSXL USWYGPJEFWIAGC
WISWDUUPUL XJTIERFECKZH
IZLNIJFG MPQGMWSZSJJDMAW
JEIBTFRKP JCFTJPLJHMTZM
LEEJQLHLA QAQEXEQUZFJTJ
CDHDSOZHBNLPZIJOE VXXQH
FTRERLFAUMVWGQXRCROYUJ
AZERKIJAXCCEKVOCIRCNFP
ZWOUMHHRSCQIEVCXLIYTM
CAHBCNRTFBIKCSRPPAJBXB
AFLNUDTSOUWVEYAFHMGKEB
RGHFGUXGZBUOGKYLZOZKMR
YAOUQSRLTELIXLTIMOC PDN
YXDQP LBDQYZLRRMGYZS XAW
RRXPQDTWNB AHJWJWOHPDXV
```

Word found (8/8):

```
TIMOCPDN: 598 comparison
QEXEQAQ: 408 comparison
GEVJEZPE: 205 comparison
PLWZODB: 295 comparison
BQOFAR: 338 comparison
DKGAX: 589 comparison
FHAJGJ: 449 comparison
CRYGIZB: 538 comparison
```

Time taken: 6.703500 ms

Total Comparison: 3420 comparison had been done
Thank you for using word-puzzle solver!

7. Large (32 x 30)

```
PJLZEDJJOXNSVAHKEXNURSPYOBVQSGM
FZPTRETXXHUMQLKDZHLVEMDLSODPVI
ZZJGAJXMLBYIHTZHL LAVIJT FHUTUBV
BFVZATOWAATWNFTQNBPHCGTWRUJGAJ
BQHYXDMVQALVNVHPIFWFMXNBRWHSVD
VDZHGVRZNSRRXIDZNTVMWYMJYSQFDD
WTWVFIRJFERLDRAUVUVOURIFUTVLP
ECKNFEQSSJVCNRLILAIHNWDKCFHBEQ
WOZLTGGRLLCGWISAQOXNVDSLDEWHS
JCUFXCSNLJFDPXUZPQQCUSALZWNJMR
XUDQGAWJSJJBDFTMKQPTJBBKMJXEWV
OUKPAABJEQKCLXQUPUQYUWOTWTJHKZ
JSQNYXXBOYPFMPDZDKDRBKJZOOFC
SSPSZSLDVAVXVPLVHCANNTHIRZJHDK
LHDIWKKSXFDCQIZUEFYIARXICYQNB
ORWWRWLABKUESOGVPBFUYBSLFTZDXW
HGJUHEDEZLXNQROURUNRQPJNAGDNU
SJJICNNXXIOKFCUGLLDNYZDYVDYPJH
IPYUZLPWLKTAWNKNOKYSYRWVOZSYPA
EIJYEBAWNMRNCNLACYIYCBHWWGAGZX
PKXFRPDJTHPOARNOSXABTERXEGBEZ
EAHXMCCZBQKZYUUDURYTMELOHMSBJV
DEXBRLPTLHFSWOZREOYSLQRVNBZ
AEKJIGLOHIDJQSQYCDATSYVYUXGOMP
ZZQRQHKTIRZSJPDIVTSDDWESVWRAOI
UOIPGCCUWPEJMCRMISJLQVGMHAWN
ZCCNJURUTETITFPKTRAGQPCUUIAWFP
ESCYTGUVVCYJBUICTSPZDKRSNSOEBSX
QZZJQVFJTWALBAUGCOSQUQRXCJMQD
MRTLZQLCUSUNIOZCDSIVFBPOQJOMNQ
XKACEQYKGGJPHQHNZVEXBZUUVQLDH
RGLIRUSCHMBRCQMUYPHTQGAYOWFEWE
```

THPOARNOSX
OWUYQUPUQ
HKHIRPEY
YDTYZOTJ
AXDXKNFW
XHRZQF
DVMP
QKPGS

Your puzzle has been solved
Here's the result:

```
PJLZEDJJOXNSVAHKEXNURSPYOBVQSGM
FZPTRETXXHUMQLKDZHLVEMDLSODPVI
ZZJGAJXMLBYIHTZHL LAVIJT FHUTUBV
BFVZATOWAATWNFTQNBPHCGTWRUJGAJ
BQHYXDMVQALVNVHPIFWFMXNBRWHSVD
VDZHGVRZNSRRXIDZNTVMWYMJYSQFDD
WTWVFIRJFERLDRAUVUVOURIFUTVLP
ECKNFEQSSJVCNRLILAIHNWDKCFHBEQ
WOZLTGGRLLCGWISAQOXNVDSLDEWHS
JCUFXCSNLJFDPXUZPQQCUSALZWNJMR
XUDQGAWJSJJBDFTMKQPTJBBKMJXEWV
OUKPAABJEQKCLXQUPUQYUWOTWTJHKZ
JSQNYXXBOYPFMPDZDKDRBKJZOOFC
SSPSZSLDVAVXVPLVHCANNTHIRZJHDK
LHDIWKKSXFDCQIZUEFYIARXICYQNB
ORWWRWLABKUESOGVPBFUYBSLFTZDXW
HGJUHEDEZLXNQROURUNRQPJNAGDNU
SJJICNNXXIOKFCUGLLDNYZDYVDYPJH
IPYUZLPWLKTAWNKNOKYSYRWVOZSYPA
EIJYEBAWNMRNCNLACYIYCBHWWGAGZX
PKXFRPDJTHPOARNOSXABTERXEGBEZ
EAHXMCCZBQKZYUUDURYTMELOHMSBJV
DEXBRLPTLHFSWOZREOYSLQRVNBZ
AEKJIGLOHIDJQSQYCDATSYVYUXGOMP
ZZQRQHKTIRZSJPDIVTSDDWESVWRAOI
UOIPGCCUWPEJMCRMISJLQVGMHAWN
ZCCNJURUTETITFPKTRAGQPCUUIAWFP
ESCYTGUVVCYJBUICTSPZDKRSNSOEBSX
QZZJQVFJTWALBAUGCOSQUQRXCJMQD
MRTLZQLCUSUNIOZCDSIVFBPOQJOMNQ
XKACEQYKGGJPHQHNZVEXBZUUVQLDH
RGLIRUSCHMBRCQMUYPHTQGAYOWFEWE
```

Word found (8/8):

THPOARNOSX: 785 comparison
OWUYQUPUQ: 424 comparison
HKHIRPEY: 819 comparison
YDTYZOTJ: 655 comparison
AXDXKNFW: 459 comparison
XHRZQF: 840 comparison
DVMP: 996 comparison
QKPGS: 1119 comparison

Time taken: 6.905000 ms
Total Comparison: 6097 comparison had been done
Thank you for using word-puzzle solver!

8. Large (30 x 32)

SSCARADRCAGNITHGILBCEACYSRETAOLF
OOMYMSIAANSNEOEVAEWHNTYETLAOWJOT
ZIRYRTRPLXCYIPAWVRLAATFLNIEFWICR
DZCGNRKPLIGOMXLRSNNUMRNILSLATISI
MEHOEOSEIEGNNMULIRBFOIYONUEASWFA
ONLPZLTDNTSNIFELUNBFRBNTOAFRUIBG
WPCLWOLNGIVUITETTFBGEUEDEIMLREQNE
IKIEAGEAAEJIOKCDRQZUDTIEMLYIEHEG
INRTTIGLASSFULNEEIFRSATPTYIEZEBL
RNDXKCHEARTINGAIFRCSTBRNRHRTNEHY
EEVEEANPJJEYNIHWEWNAATLHEJYGESODC
SCAETLPRESCEIENCEZDITTELEMSHUEISOHS
OVNCEBETIEINGMDPRROSELSSMEJKLRRHM
LAUATTRANWZSNMIFJYEIOISYUBNDUTPUN
ERCFRIMKGFQETNGTMMVHDDRKPUIFHLN
MIJODBVVINKNGHMEEFQLONIEPKKQEMCW
NEUIZRMAENIHTWDAJRTPRWADXJVALDUO
IGEMOMCETNARSTAOCTSIAWFTRJNYAZWT
ZAXIJVRMEETHKPGGEGIUONFYPKGLSAQLX
ITDGRNJBEGSESZAQVMEQITMCJLNZNTJ
NIVLFNIAEBRPSIVNSDIQZTSNBBVLLQMA
GNUSPPAEBCCQGWGVYMGQCHLMPTVTKAXNQ
BGBDWAXGALBGRRIYGMCBQBRDMPISUDGL
GFMUQJBCYAMTRVIGELPNDJYAERCRIHJ
WIMTLDDIDHILGOAIVTVQDRDTUZWMTOXBJ
OBMNKDMJTOQPDRCYDMIUBNRHHRRYKHI
ZEXSFMRRLQSFQPSMGOWMXGIVYBTYZGKV
HIQHKGIVUBYCDZNKKBCFLDZUHRBFBFPV
MCYORBSKXWWQKJCBVALYZXGSZIVMVEGG
OTDOOGAUACRRZVEQJJCWQIBRNHWLOCFVN

ALLEGROS
ANTONYMS
ANXIETIES
ASTROLOGICAL
ASYMMETRICALLY
ATTRIBUTABLE
BLIGHTING
BULLPEN
CALLING
CENSER
CHAUFFEURS
CHEERFULLY
CONFEDERATES
DIRKS
DISINFECTING
ENAMORED
EQUALITY
FINALIZED
FLOATERS

FLOATERS
FLUXING
GLASSFUL
HEARTING
HONEYMOON
HOODWINKING
HOSTILITY
INDETERMINATE
INVENTIVENESS
LEASING
NURSERYMEN
OARING
OVERZEALOUS
PHIALLED
PLIGHTED
PRESCEIENCE
PRESSURED
RAFT
RAPPED
REACTIVATE
REGIMENTS
REMEDIED
REMEMBRANCE
SCAR
SHRINKABLE
SOLEMNIZING
TIEING
TRIAGE
VARIEGATING
WAISTCOATS
WEAVE
WHINY

Your puzzle has been solved
Here's the result:

SSCARADRCAGNITHGILBCEACYSRETAOLF
OOMYMSIAANSNEOEVAEWHNTYETLAOWJOT
ZIRYRTRPLXCYIPAWVRLAATFLNIEFWICR
DZCGNRKPLIGOMXLRSNNUMRNILSLATISI
MEHOEOSEIEGNNMULIRBFOIYONUEASWFA
ONLPZLTDNTSNIFELUNBFRBNTOAFRUIBG
WPCLWOLNGIVUITETTFBGEUEDEIMLREQNE
IKIEAGEAAEJIOKCDRQZUDTIEMLYIEHEG
INRTTIGLASSFULNEEIFRSATPTYIEZEBL
RNDXKCHEARTINGAIFRCSTBRNRHRTNEHY
EEVEEANPJJEYNIHWEWNAATLHEJYGESODC
SCAETLPRESCEIENCEZDITTELEMSHUEISOHS
OVNCEBETIEINGMDPRROSELSSMEJKLRRHM
LAUATTRANWZSNMIFJYEIOISYUBNDUTPUN
ERCFRIMKGFQETNGTMMVHDDRKPUIFHLN
MIJODBVVINKNGHMEEFQLONIEPKKQEMCW
NEUIZRMAENIHTWDAJRTPRWADXJVALDUO
IGEMOMCETNARSTAOCTSIAWFTRJNYAZWT
ZAXIJVRMEETHKPGGEGIUONFYPKGLSAQLX
ITDGRNJBEGSESZAQVMEQITMCJLNZNTJ
NIVLFNIAEBRPSIVNSDIQZTSNBBVLLQMA
GNUSPPAEBCCQGWGVYMGQCHLMPTVTKAXNQ
BGBDWAXGALBGRRIYGMCBQBRDMPISUDGL
GFMUQJBCYAMTRVIGELPNDJYAERCRIHJ
WIMTLDDIDHILGOAIVTVQDRDTUZWMTOXBJ
OBMNKDMJTOQPDRCYDMIUBNRHHRRYKHI
ZEXSFMRRLQSFQPSMGOWMXGIVYBTYZGKV
HIQHKGIVUBYCDZNKKBCFLDZUHRBFBFPV
MCYORBSKXWWQKJCBVALYZXGSZIVMVEGG
OTDOOGAUACRRZVEQJJCWQIBRNHWLOCFVN

Word found (50/50):

ALLEGROS: 377 comparison
ANTONYMS: 381 comparison
ANXIETIES: 30 comparison
ASTROLOGICAL: 24 comparison
ASYMMETRICALLY: 35 comparison
ATTRIBUTABLE: 50 comparison
BLIGHTING: 31 comparison
BULLPEN: 262 comparison
CALLING: 24 comparison
CENSER: 45 comparison
CHAUFFEURS: 41 comparison
CHEERFULLY: 446 comparison
CONFEDERATES: 110 comparison
DIRKS: 13 comparison
DISINFECTING: 578 comparison

DISINFECTING: 578 comparison
ENAMORED: 30 comparison
EQUALITY: 454 comparison
FINALIZED: 101 comparison
FLOATERS: 41 comparison
FLUXING: 286 comparison
GLASSFUL: 342 comparison
HEARTING: 340 comparison
HONEYMOON: 471 comparison
HOODWINKING: 578 comparison
HOSTILITY: 514 comparison
INDETERMINATE: 401 comparison
INVENTIVENESS: 473 comparison
LEASING: 78 comparison
NURSERYMEN: 792 comparison
OARING: 73 comparison
OVERZEALOUS: 676 comparison
PHIALLED: 391 comparison
PLIGHTED: 544 comparison
PRESCEIENCE: 433 comparison
PRESSURED: 334 comparison
RAFT: 44 comparison
RAPPED: 23 comparison
REACTIVATE: 446 comparison
REGIMENTS: 819 comparison
REMEDIED: 490 comparison
REMEMBRANCE: 995 comparison
SCAR: 8 comparison
SHRINKABLE: 868 comparison
SOLEMNIZING: 490 comparison
TIEING: 601 comparison
TRIAGE: 96 comparison
VARIEGATING: 437 comparison
WAISTCOATS: 689 comparison
WEAVE: 61 comparison
WHINY: 399 comparison

Time taken: 23.276300 ms
Total Comparison: 16265 comparison had been done
Thank you for using word-puzzle solver!

9. Large (36 x 34)

```

JISTJPRTUZZBPRRQQRUTVKKVIBJYYIQMFKP
IOQ000JIFNNCMKCLZYSRVSKONBZRAMUOHGW
NQRYEZDZULUJMBDMORGRGWOUQCQHKNB DYHY
NIFTQANOJNRYCGTUFWDWBAR TLVKMPBJPDKA
UKZRTVOCNSHHZXLWBLARLSRCDDJJCOEXOD
ABYPHLMSSQLUPGLXVRMAUYPRDNALWDANIM
MRWEKIRAFNGSCYRYMWSODUMWGJZQRRLHME
HGVQDQWQCCKAFTSOYSJSQVCJBTLCXEJJUNU
APBROMQTFBWERSHCVJCJZIJVOPJGLBODNXX
FSXNUIONCNJZEYWHCFZPYXSFDCCPJMBZU
MNYAHLXPMVDOMISGEWGSWHTKZE OYERKEQ
CKSXIGNVJTDEYSWXNVBMNXPKRWLGYCDZFK
YUOPANDXHZF SRFVQRRROPQKWVBRKAPPWDAV
PYBZIGHMKTMAICFUYPMJKYUSSYKYICIRIJ
EYSRCVYMLCKYFXEXEPXNWBQEILSQHIUHTU
DRRJCGIFBDHPFPCNJUPBQZKIMLAVPJBDDBO
EZPGTLJUSOWUNIREKAJHJWFLQBWVGNJUYO
KNBBNBATYCIUQYFXVLP SKCOAAUYDJXATUT
ELVMFMDBAFGBXLYJDLZQE EGVJRJEGWVTSYL
CLQHGXCAWCDZPYFOOUCVEBWEHDI MLRFZ
AIQSNXBULSDMMOEQVMZPNMVD CRVKUPXTPS
CQMBKMPFP UHFLVFBYZGDQBUQLAEBDKRQGL
LZTYZYDEJKOUAJBZHARPY PZFVBBYIYPMIU
QNOQFTKWZOFBMYZYUSUL DSSUZOMXTJEZVK
VVAEPFZPQATDKESHGYMAFWZVCHFRXBKHGK
SJJOTYLLXXTFV SJHLDYRCPOPQFGQTARJKS
RZMOPGTTYERYZCSXDKSVSOBAAUCZFASMBJ
CCWUIYIZKRSRSOYVBGLCSFUQECFFIHOTSP
URPWJHMDLMIJIEKJBSL NABRUDEBGITUFY
SHGIWGPCVVRWXXTYVJJOUKYBXMANNDLUOYE
JBHNOHLBAWKNLPILCYUNFUCHIMUZWZJP00
QIKPRXQANBWIPCNEMKJQLGUJIKQDRTSYZZ
QCEDQCXHEPATGWHQCGJOBUBJNLAPCTCKWXS
EDXXOXVCQTUXSHUMECKJGTRJKJVJOCLOZ
PUYLNAAATXGIIJNEHPLMNZZADPNNDJHSSAPV
GLCVXDHIPEDMYYYQ QHECQGTQNHXWBOCARX

```

```

CLZYSRVSK
ZZNMLPHENJ
SJSYEYI
GCZAJMH
DWQXRRRI
LIHBAS
SRFSZQC
IYSMCBU

```

```

JISTJPRTUZZBPRRQQRUTVKKVIBJYYIQMFKP
IOQ000JIFNNCMKCLZYSRVSKONBZRAMUOHGW
NQRYEZDZULUJMBDMORGRGWOUQCQHKNB DYHY
NIFTQANOJNRYCGTUFWDWBAR TLVKMPBJPDKA
UKZRTVOCNSHHZXLWBLARLSRCDDJJCOEXOD
ABYPHLMSSQLUPGLXVRMAUYPRDNALWDANIM
MRWEKIRAFNGSCYRYMWSODUMWGJZQRRLHME
HGVQDQWQCCKAFTSOYSJSQVCJBTLCXEJJUNU
APBROMQTFBWERSHCVJCJZIJVOPJGLBODNXX
FSXNUIONCNJZEYWHCFZPYXSFDCCPJMBZU
MNYAHLXPMVDOMISGEWGSWHTKZE OYERKEQ
CKSXIGNVJTDEYSWXNVBMNXPKRWLGYCDZFK
YUOPANDXHZF SRFVQRRROPQKWVBRKAPPWDAV
PYBZIGHMKTMAICFUYPMJKYUSSYKYICIRIJ
EYSRCVYMLCKYFXEXEPXNWBQEILSQHIUHTU
DRRJCGIFBDHPFPCNJUPBQZKIMLAVPJBDDBO
EZPGTLJUSOWUNIREKAJHJWFLQBWVGNJUYO
KNBBNBATYCIUQYFXVLP SKCOAAUYDJXATUT
ELVMFMDBAFGBXLYJDLZQE EGVJRJEGWVTSYL
CLQHGXCAWCDZPYFOOUCVEBWEHDI MLRFZ
AIQSNXBULSDMMOEQVMZPNMVD CRVKUPXTPS
CQMBKMPFP UHFLVFBYZGDQBUQLAEBDKRQGL
LZTYZYDEJKOUAJBZHARPY PZFVBBYIYPMIU
QNOQFTKWZOFBMYZYUSUL DSSUZOMXTJEZVK
VVAEPFZPQATDKESHGYMAFWZVCHFRXBKHGK
SJJOTYLLXXTFV SJHLDYRCPOPQFGQTARJKS
RZMOPGTTYERYZCSXDKSVSOBAAUCZFASMBJ
CCWUIYIZKRSRSOYVBGLCSFUQECFFIHOTSP
URPWJHMDLMIJIEKJBSL NABRUDEBGITUFY
SHGIWGPCVVRWXXTYVJJOUKYBXMANNDLUOYE
JBHNOHLBAWKNLPILCYUNFUCHIMUZWZJP00
QIKPRXQANBWIPCNEMKJQLGUJIKQDRTSYZZ
QCEDQCXHEPATGWHQCGJOBUBJNLAPCTCKWXS
EDXXOXVCQTUXSHUMECKJGTRJKJVJOCLOZ
PUYLNAAATXGIIJNEHPLMNZZADPNNDJHSSAPV
GLCVXDHIPEDMYYYQ QHECQGTQNHXWBOCARX

```

Word found (8/8):

- CLZYSRVSK: 67 comparison
- ZZNMLPHENJ: 1530 comparison
- SJSYEYI: 1119 comparison
- GCZAJMH: 371 comparison
- DWQXRRRI: 1025 comparison
- LIHBAS: 1482 comparison
- SRFSZQC: 1231 comparison
- IYSMCBU: 438 comparison

Time taken: 5.644300 ms
Total Comparison: 7263 comparison had been done
Thank you for using word-puzzle solver!

D. Extra

Alamat Drive:

<https://drive.google.com/drive/folders/1VzuelxY71KxqpOKkGneISHUYjSifLEQy?usp=sharing>

Alamat Github: <https://github.com/IloveNoodles/word-puzzle>

Checklist:

Poin	Ya	Tidak
1. Program berhasil dikompilasi tanpa kesalahan (no syntax error)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Program Berhasil <i>running</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Program dapat membaca file masukan dan menuliskan luaran	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Program berhasil menemukan semua kata di dalam puzzle	<input checked="" type="checkbox"/>	<input type="checkbox"/>