# Contents

BREAKING THE ICE
WITH
REGULAR EXPRESSIONS

# Every Crew Has a Home

1 Reindeer Lane, North Pole, AK 99705

120 East 4th Street, Juneau, AK 99705

BREAKING THE ICE
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# Building the Number and Street Name

**Regular Expression**

$$\backslash d+\backslash s[\backslash w\backslash s]+\backslash w\{4,6\},\backslash s$$

Some numbers and 2 words followed by a comma and a space

**Possible Subjects**

1 Reindeer Lane,

Number and street name fully matched

# Building the City Pattern

**Regular Expression**

$$[\backslash w \backslash s]+, \backslash s$$

city name of any number of characters followed by a comma and a space

**Possible Subjects**

North Pole,

city is completely matched

# Building the State Pattern

**Regular Expression**

$$\text{\textbackslash w\{2\}\textbackslash s}$$

2-letter state followed by a space

**Possible Subjects**

AK

State is completely matched

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# Building the Zip Pattern

**Regular Expression**

$$\backslash d\{5\}$$

5-digit zip

**Possible Subjects**

99705 ✅

Zip code is completely matched

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# Our Fully Matching Pattern

**Regular Expression**

`/^\d+\s[\w\s]+\w{4,6},\s[\w\s]+,\s\w{2}\s\d{5}$/ig`

Anchor to beginning of Subject

Anchor to end of Subject

**Possible Subjects**

`1 Reindeer Lane, North Pole, AK 99705` ✅

# Matching Groups

/(learnbydoing)/

Possible Subjects

learnbydoing

Match Groups

1.

learnbydoing

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# Matching Groups

/(learn(bydoing))/

Possible Subjects

learnbydoing

Each group is returned

Match Groups

1.

learnbydoing

2.

bydoing

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# Matching Groups

Each group returns captured matches

`/(learn((by)doing))/`

**Possible Subjects**

`learnbydoing`

Each group is returned

**Match Groups**

| 1. | 2. | 3. |
|---|---|---|
| **learnbydoing** | **bydoing** | **by** |

# Matching Groups — Street

**Regular Expression**

```
/^(\d+\s[\w\s]+\w{4,6}),\s[\w\s]+,\s\w{2}\s\d{5}$/i
```

**Possible Subjects** ✅

```
1 Reindeer Lane, North Pole, AK 99705
```

**Match Groups**

1.

**1 Reindeer Lane**

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# Matching Groups — City

First match group for house number and street

Second match group for city

**Regular Expression**

```
/^(\d+\s[\w\s]+\w{4,6}),\s([\w\s]+),\s\w{2}\s\d{5}$/i
```

**Possible Subjects**

✅

```
1 Reindeer Lane, North Pole, AK 99705
```

**Match Groups**

| 1. | 2. |
|---|---|
| **1 Reindeer Lane** | **North Pole** |

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# Matching Groups — State

Third match group for 2-letter state
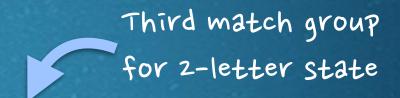
**Regular Expression**

`/^(\d+\s[\w\s]+\w{4,6}),\s([\w\s]+),\s(\w{2})\s\d{5}$/i`

**Possible Subjects**

`1 Reindeer Lane, North Pole, AK 99705` ✅

**Match Groups**

| 1. | 2. | 3. |
|---|---|---|
| **1 Reindeer Lane** | **North Pole** | **AK** |

# Matching Groups — Zip

**Final match group for zip code**

**Regular Expression**

```
/^(\d+\s[\w\s]+\w{4,6}),\s([\w\s]+),\s(\w{2})\s(\d{5})$/i
```

**Possible Subjects**

```
1 Reindeer Lane, North Pole, AK 99705
```
✅

**Match Groups**

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| 1 Reindeer Lane | North Pole | AK | 99705 |

# Problem: Need to Restrict Potential Streets

**Regular Expression**

Should only match "street" or "lane"

```
/^(\d+\s[\w\s]+\w{4,6}),\s([\w\s]+),\s(\w{2})\s(\d{5})$/i
```

**Possible Subjects**

✅

1 Reindeer Lane, North Pole, AK 99705

✅

15 Discovery Road, Juneau, AK 99705

we only want to match "street" or "lane"

# Solution: Restricting the Street

**Regular Expression**

Now we're only looking for "street" or "lane"

```
/^(\d+\s[\w\s]+(street|lane)),\s([\w\s]+),\s(\w{2})\s(\d{5})$/i
```

**Possible Subjects**

1 Reindeer Lane, North Pole, AK 99705 ✅

15 Discovery Road, Juneau, AK 99705

Now we do not match on "road"

# Problem: Group Returns Unwanted Result

Group used for evaluation purposes returns unwanted value

**Regular Expression**

`/^(\d+\s[\w\s]+(street|lane)),\s([\w\s]+),\s(\w{2})\s(\d{5})$/i`

**Possible Subjects**

`1 Reindeer Lane, North Pole, AK 99705` ✅

**Match Groups**

| 1. | 2. ❌ | 3. | 4. | 5. |
|---|---|---|---|---|
| 1 Reindeer Lane | Lane | North Pole | AK | 99705 |

we don't want to capture just the type of street!

# Making the Street Type a Non-capturing Group

Non-capturing group

**Regular Expression**

```
/^(\d+\s[\w\s]+(?:street|lane)),\s([\w\s]+),\s(\w{2})\s(\d{5})$/i
```

**Possible Subjects**

1 Reindeer Lane, North Pole, AK 99705 ✅

Now we have the correct number of groups

**Match Groups**

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| **1 Reindeer Lane** | **North Pole** | **AK** | **99705** |