

# 기획자/마케터 역량강화를 위한 프로그래밍 camp

Google tag manager

# Introduce

## 최우영

- Co-founder, Developer at disceptio
- Solution Architect, Web Developer, Instructor
- python web crawling bootcamp(gilbut, 2018 expected)
- Skills: Python, Golang, Julia, Node.js, Google tag manager ...

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# javaScript from scratch

## javaScript란?

- 객체 기반의 스크립트 프로그래밍 언어
- 웹페이지의 동적인 제어 목적
- Netscape의 Brendan Eich가 모카(Mocha)를 개발
- LiveScript -> javaScript로 개명

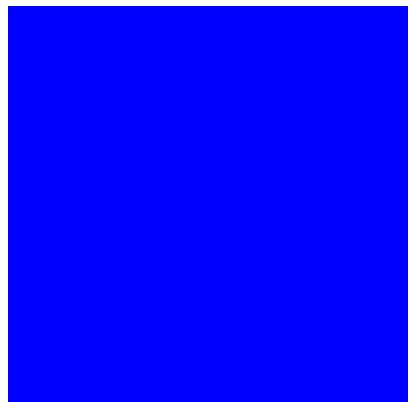
## Static Web site - 1



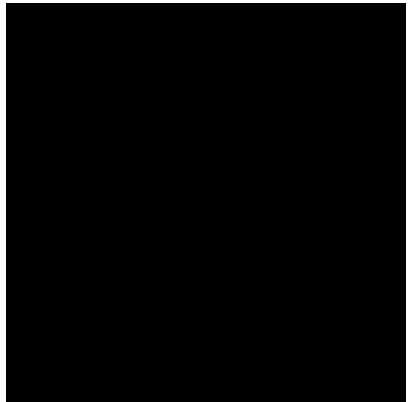
## Static Web site - 2



## Static Web site - 3



# Dynamic Web site



Red

Green

Blue

## Java != javaScript

Java	vs	javaScript
Sun	개발	Brendan Eich
JVM	구동방식	Script Engine(Browser)
C	영향	C
인도	Like	인도네시아

Try "hello world!"

```
print("hello python!")
```

```
console.log("hello javaScript!");
alert("hello javaScript!");
document.write("hello javaScript!");
```

## variable, statements, operation

```
a=3  
b=5  
c=a+b
```

```
// declare a,b,c  
var a,b,c;  
// assign a,b  
a = 3;  
b = 5;  
// assign statements with + operator  
c = a + b;
```

## functions

```
def name(parameter1, parameter2, ...):  
    # code to be executed
```

```
function name(parameter1, parameter2, ...) {  
    // code to be executed  
}
```

## functions

```
def print_hello(name):  
    print("hello, " + name)
```

```
function printHello(name) {  
    console.log("hello, " + name);  
}
```

## functions

```
def awesum(num1, num2):  
    return num1 + num2
```

```
function aweSum(num1, num2) {  
    return num1 + num2;  
}
```

## Conditional statements - if, else

```
a = 10
if a==10:
    print("a is 10")
else:
    print("a is not 10")
```

```
var a = 10;
if (a === 10){
    console.log("a is 10");
} else {
    console.log("a is not 10");
}
```

## Conditional statements - if in else

```
a = 10
if a==10:
    print("a is 10")
elif a==5:
    print("a is 5")
else:
    print("a is neither 10 nor 5")
```

```
var a = 10;
if (a === 10){
    console.log("a is 10");
} else if (a === 5){
    console.log("a is 5");
} else {
    console.log("a is neither 10 nor 5");
}
```

# Conditional statements - switch

Null

```
switch (new Date().getDay()){  
    case 0:  
    case 6:  
        console.log("Weekend!!!!");  
        break;  
    case 1:  
    case 2:  
    case 3:  
    case 4:  
    case 5:  
        console.log("Weekday..");  
        break;  
}
```

## loop - for

```
for i in range(1,10+1):
    print("hello for " + i + " times")
```

```
for (i = 1; i < 11; i++) {
    console.log("hello for "+i+" times");
}
```

## loop - while

```
while i<10+1:  
    print("hello")  
    i+=1
```

```
while (i<11){  
    console.log("hello");  
    i++;  
}
```

## loop - break

```
for i in range(1,10+1):
    if i == 5:
        break
    print("hello for "+i+" times")
```

```
for (i = 1; i < 11; i++) {
    if (i==5) {break;}
    console.log("hello for "+i+" times");
}
```

## loop - continue

```
for i in range(1,10+1):
    if i%2==0:
        continue
    print("hello for "+i+" times")
```

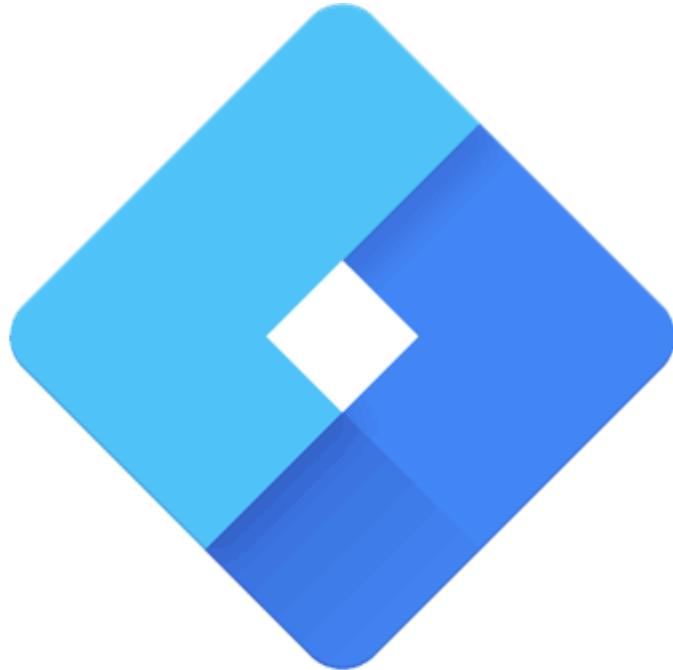
```
for (i = 1; i < 11; i++) {
    if (i%2==0) {continue;}
    console.log("hello for "+i+" times");
}
```

=? ==? ===??

- `=` : Assignment Operator( `a=10` )
- `==` : Equal Operator( `1=="1"` )
- `===` : Strict Equal Operator( `1==="1"` )

# Google tag manager

What is Google tag manager?



# Google Tag Manager



Website



Google Tag Manager



 Google Analytics

 Google AdWords

 Other tools

Let's get started!

GTM 설치 부터 GA Implementation 까지

# Requirements

- Chrome Extensions
  - [Google Tag Assistant](#)
    - tag가 올바르게 동작하고 있는지 확인하기 위함
  - [Web Developer](#)
    - 웹 관련 다양한 기능들을 간편하게 조작할 수 있도록 도와주는 도구

# Sign up

google tag manager

The screenshot shows the Google Tag Manager interface. At the top, there's a navigation bar with tabs: '계정' (Account), '작업공간' (Workspaces), '버전' (Version), and '관리자' (Admin). The '관리자' tab is highlighted with a blue underline. Below the navigation bar, the path '관리 > 계정 만들기' (Management > Create account) is visible. The main content area is titled '새 계정 추가' (Add new account). It shows a step-by-step process: '1 계정 설정' (Step 1: Account settings) and '2 컨테이너 설정' (Step 2: Container settings). In the 'Account settings' step, there's a field labeled '계정 이름' (Account name) with the placeholder '예: 내 회사' (e.g., My Company). Below the field is a checkbox for sharing data with Google and external parties under the name. A blue '계속' (Continue) button is located below the input field. At the bottom of the step, there are two buttons: a blue '만들기' (Create) button and a grey '취소' (Cancel) button.

# Sign up

새 계정 추가

1 계정 설정

계정 이름 **fcdmsgtm**

2 컨테이너 설정

컨테이너 이름

컨테이너 사용 위치

웹  iOS  Android  AMP

[만들기](#) [취소](#)

# Sign up



## Google 태그 관리자 설치

아래의 코드를 복사하여 웹사이트의 모든 페이지에 붙여넣으세요.

페이지의 <head>에서 가능한 한 높은 위치에 코드를 붙여넣으세요.

```
<!-- Google Tag Manager -->
<script>(function(w,d,s,l,i){w[l]=w[l]||[];w[l].push({'gtm.start':
new Date().getTime(),event:'gtm.js'});var f=d.createElement(s)[0],
j=d.createElement(s),dl=l!='dataLayer'?l+'l:'';j.async=true;j.src=
'https://www.googletagmanager.com/gtm.js?id='+i+dl;f.parentNode.insertBefore(j,f);
})(window,document,'script','dataLayer','GTM-5SK4LH6');</script>
<!-- End Google Tag Manager -->
```

또한 여는 <body> 태그 바로 뒤에 코드를 붙여넣으세요.

```
<!-- Google Tag Manager (noscript) -->
<noscript><iframe src="https://www.googletagmanager.com/ns.html?id=GTM-5SK4LH6"
height="0" width="0" style="display:none;visibility:hidden"></iframe></noscript>
<!-- End Google Tag Manager (noscript) -->
```

Google 태그 관리자 스니펫 설치에 대한 자세한 정보는 [퀵 스타트 가이드](#)를 참조하세요.

확인

# Success!

Ulgoon github pages  
ulgoon.github.io ▾

ACCOUNTS WORKSPACE VERSIONS ADMIN

Current Workspace  
Default Workspace >

Search

Overview

Tags

Triggers

Variables

Folders

New Tag

Choose from over 50 tag types.

ADD A NEW TAG >

Description

EDIT DESCRIPTION >

Now Editing

Default Workspace

⋮

Workspace Changes

0 Modified    0 Added    0 Deleted

MANAGE WORKSPACES >

Container Not Published

Add tags and publish to make your changes live.

Workspace Changes

This workspace has no changes.

LEARN MORE

Activity History >

# User-defined variable

X 변수 선택

이름

-  containerId
-  Event
-  Page Hostname
-  Page Path
-  Page URL
-  Referrer

X AnalyticsId □

변수 구성

변수 유형

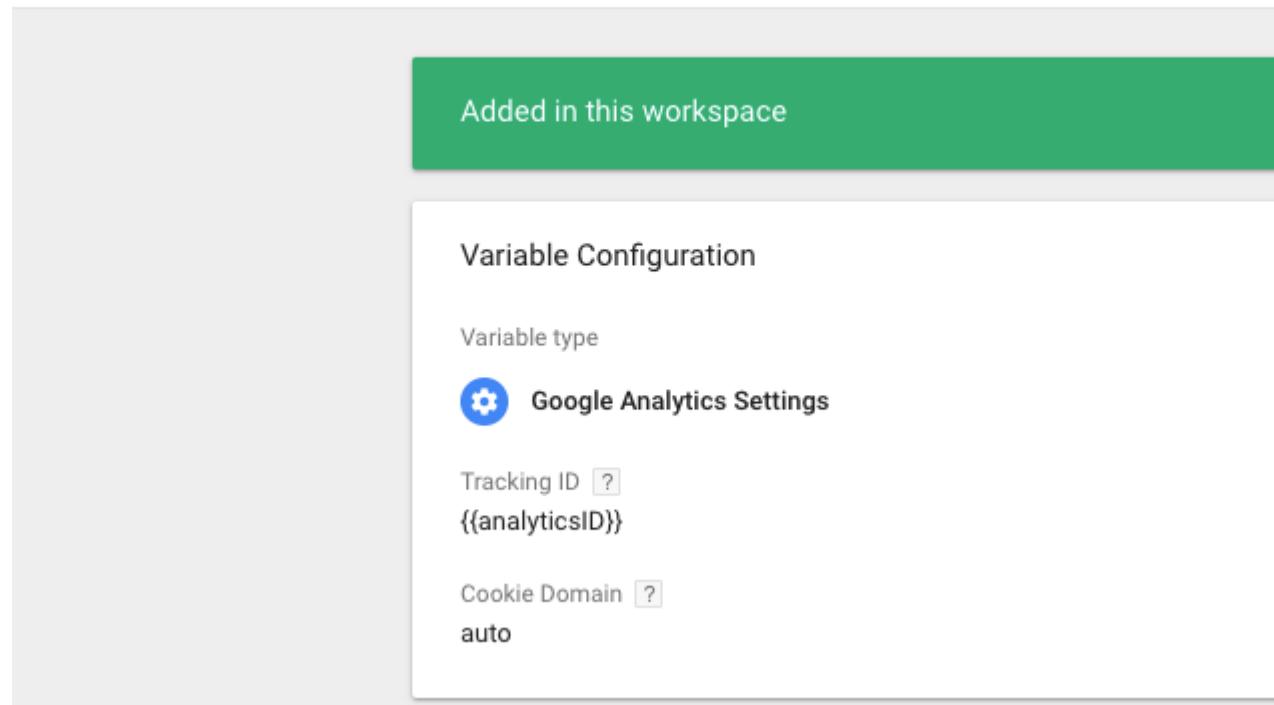
-  상수

값

UA-87265166-1

# User-defined variable

GASettings 



The screenshot shows the 'Variable Configuration' page for a user-defined variable named 'GASettings'. The variable type is set to 'Google Analytics Settings'. The 'Tracking ID' is defined as '{{analyticsID}}'. The 'Cookie Domain' is set to 'auto'. A green banner at the top states 'Added in this workspace'.

Added in this workspace

Variable Configuration

Variable type

 Google Analytics Settings

Tracking ID ?  
{{analyticsID}}

Cookie Domain ?  
auto

# Create tag GA - Page View - All Pages

## GA - Page View - All Pages

Added in this workspace

Tag Configuration

Tag type

 **Universal Analytics**  
Google Analytics

Track Type  
Page View

Google Analytics Settings   
`{{GASettings}}` 

Triggering

Firing Triggers

 **All Pages**  
Page View

# GA Implementation Success!

Google Tag Manager??

The screenshot shows the Google Tag Manager interface. At the top, there are tabs for 'Tags' (which is selected), 'Variables', and 'Data Layer'. On the left, a sidebar titled 'Summary' lists three tag types: 'Window Loaded' (3 occurrences), 'DOM Ready' (2 occurrences), and 'Page View' (1 occurrence). The main content area is titled 'Summary' and contains sections for 'Tags Fired On This Page:' and 'Tags Not Fired On This Page:'. Under 'Tags Fired On This Page:', a box highlights a 'Google Analytics - PageView - AllPages' tag from 'Universal Analytics' that has fired 1 time(s).

Google Tag Manager

Tags   Variables   Data Layer

Summary

3 Window Loaded

2 DOM Ready

1 Page View

Summary

Tags Fired On This Page:

Google Analytics - PageView - AllPages

Universal Analytics - Fired 1 time(s)

Tags Not Fired On This Page:

# DOM Ready vs Window loaded

1. Pageview
2. DOM Ready
  - DOM 이 로드되어 처리됨(js event)

```
$(document).ready(function() {  
    alert("document is ready");  
});
```

3. Window loaded
  - 모든 리소스가 로드된 후 처리됨(웹페이지 로딩 완료 ,js event)

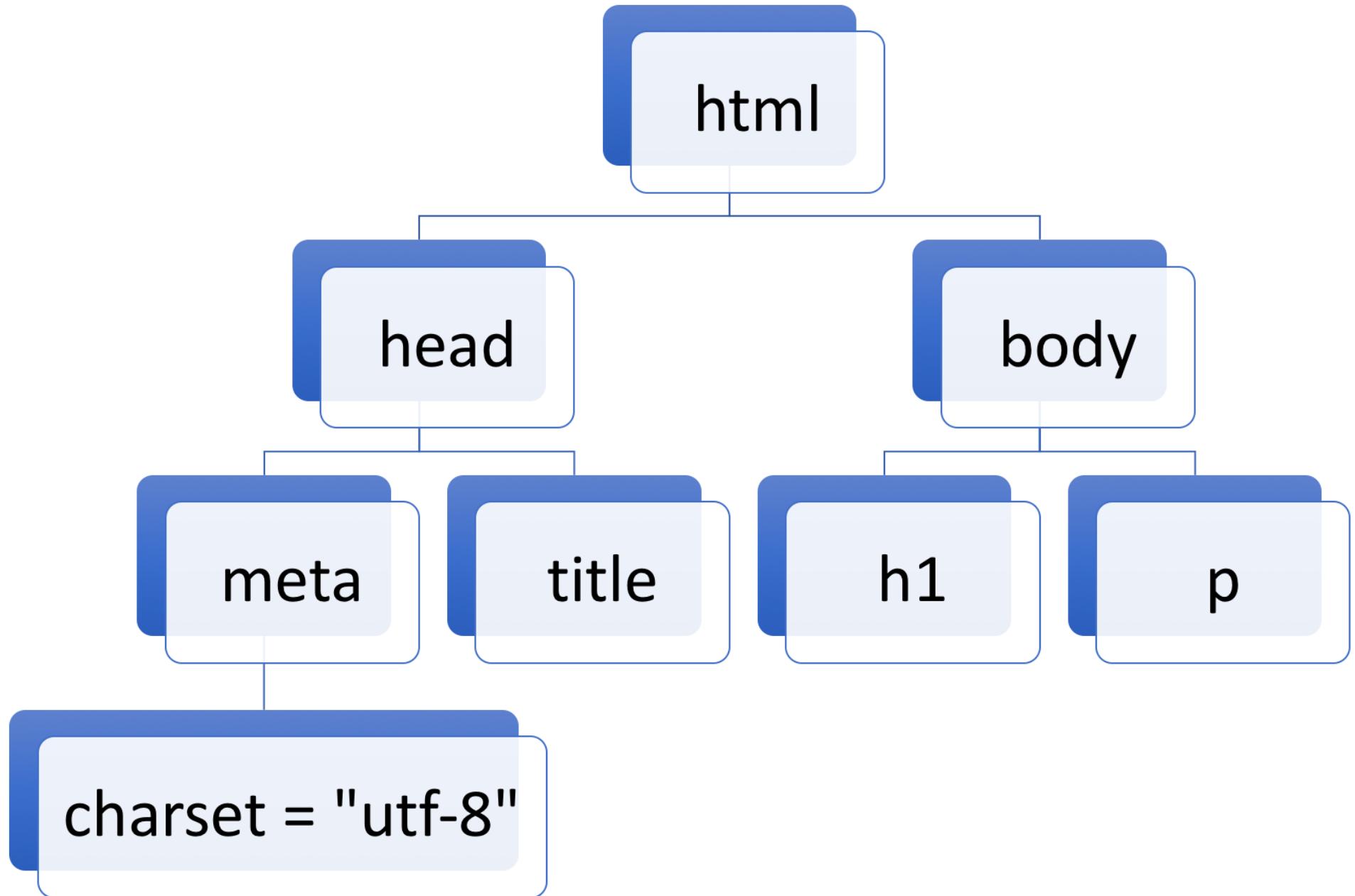
```
$(window).load(function() {  
    alert("window is loaded");  
});
```

# DOM

## Document Object Model

```
<!doctype html>
<html>
  <head>
    <meta charset="utf-8">
    <title>My page</title>
  </head>
  <body>
    <h1>Home</h1>
    <p>Hello there!</p>
  </body>
</html>
```

# DOM



## Google Tag Manager Diagram

- Account
  - Container
    - Tag
      - Trigger
      - Variable

## Tags

- 페이지에서 실행되는 Code Snippet
- 수집된 정보를 외부로 전송하는 역할
- 정의된 트리거에 대해 상호작용

## Triggers

- 참 또는 거짓을 판별하는 요소
- 변수와 트리거의 조건과 비교를 통해 판별
- 데이터 레이어 없이도 트리거 작동 가능
  - 개발 요소를 줄이기 위한 노력

## Triggers - 구성요소

- Variables
  - 트리거가 작동하기 위한 변수
  - Built-in, User-defined
  - placeholder, "x", {}
- Operators
  - 트리거가 작동하기 위한 조건
  - equals, contains, doesn't contain
- Values
  - 기준값

ex) {{url}} equals about.html

## Variables

- 다양한 옵션과 방법으로 변수를 저장하고 사용할 수 있음
- {{AnalyticsID}} = UA-XXXXX-XX ...

```
<script>
    function{ ... }
</script>
```

## Data Layer

- Google Tag Manager에 전달하려는 변수와 값을 담고 있는 객체

```
<script>
    dataLayer =[{
        'variable': 'value',
        'variable': 'value'
    }];
</script>

<!-- Start Google Tag Manager -->
...
<!-- End Google Tag Manager -->
```

# Google Tag Manager Flow

0. Google Tag Manager code snippet을 추가한다.
1. (개발자에게 데이터레이어를 추가해달라고 한다.)
2. 변수와 트리거를 생성한다.
3. 태그를 생성한다.
4. Preview를 통해 정상동작을 확인한다.
5. Deploy!
6. 데이터를 수집한다.

# Version

## GA Click Event Tag

## GA Event vs GTM Event

GA

- Endpoint
- GTM을 통해 발사된 UA 태그의 결과값

GTM

- dataLayer checkpoint
- datalayer로 푸시되는 웹페이지 요소들의 종류
- 트리거를 설정하는데 쓰임

# Create Ceneric Click Trigger

## X Generic Click Trigger □

### Trigger Configuration

Trigger type



Click - All Elements



This trigger fires on



All Clicks



Some Clicks

# Activate Built-in Click Variables

Built-In Variables [?](#)

**CONFIGURE**

Name ▾	Type
Click Classes	Data Layer Variable
Click Element	Data Layer Variable
Click ID	Data Layer Variable
Event	Custom Event
Page Hostname	URL
Page Path	URL
Page URL	URL
Referrer	HTTP Referrer

User-Defined Variables

Error Line

Debug Mode

**Clicks**

Click Element

Click Classes

Click ID

Click Target

Click URL

Click Text

**Forms**

Form Elements

# Check variables

The screenshot shows the Google Tag Manager interface with the 'Variables' tab selected. On the left, a sidebar lists various triggers: Summary, 6 gtm.click, 5 gtm.click (which is highlighted with a blue selection bar), 4 Window Loaded, 3 DOM Ready, 2 Page View, and 1 Message. The main area displays a table of variables for the selected 'gtm.click' trigger. The variables listed are:

Variable	Type	Value
_event	Custom Event	string 'gtm.click'
AnalyticsId	Constant String	string 'UA-87265166-1'
Click Classes	Data Layer Variable	string 'gtm_click_setup uk-button'
Click Element	Data Layer Variable	object [object HTMLElement]
Click ID	Data Layer Variable	string ''
Click Target	Data Layer Variable	string ''
Click Text	Auto-Event Variable	string 'Set up'
Click URL	Data Layer Variable	string ''

# Check Data layer

The screenshot shows the Google Tag Manager interface with the 'Data Layer' tab selected. On the left, a sidebar lists various triggers: 8 Message, 7 gtm.click, 6 gtm.click, 5 gtm.click, 4 Window Loaded, 3 DOM Ready, and 2 Page View. The 'Message' trigger is currently active. In the main area, a 'Message' box displays the code: 1 {eventID: 'mainClick'}. To the right, a panel titled 'Data Layer values after this Message:' shows the following JSON output:

```
1 {  
2   eventID: 'mainClick',  
3   dataCleanup: '',  
4   gtm: {  
5     start: 1479394730085,  
6     uniqueEventId: 1479394731802,  
7     element: [object HTMLElement],  
8     elementClasses: 'gtm_click_main uk-button',  
9     elementId: '',  
10    elementTarget: '',  
11    elementUrl: ''  
12  }.
```

# Create Specific Click Trigger

X Setup Click Trigger  

Added in this workspace

[ABANDON CHANGES](#)

**Trigger Configuration**

Trigger type

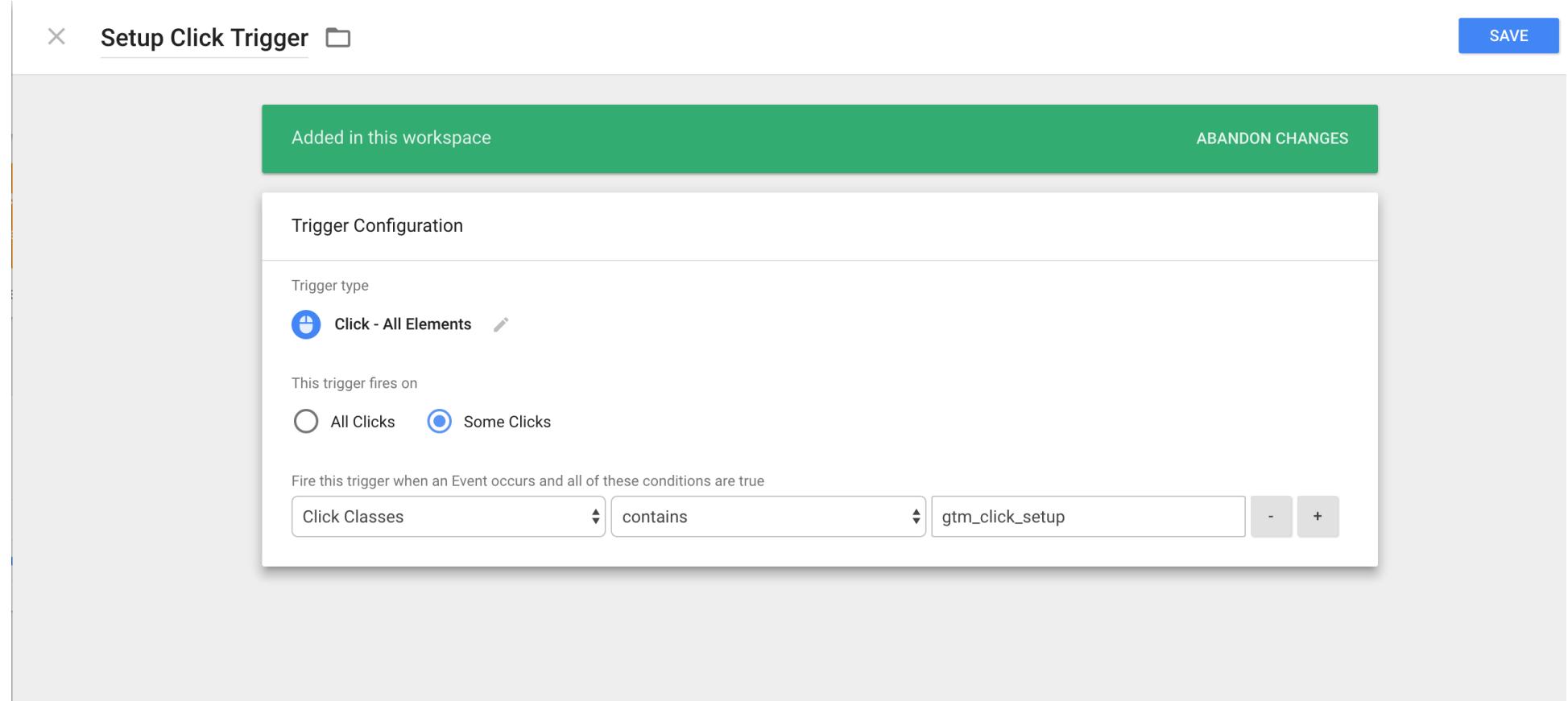
**Click - All Elements** Edit

This trigger fires on

All Clicks  Some Clicks

Fire this trigger when an Event occurs and all of these conditions are true

Click Classes contains gtm\_click\_setup - +



# Triggers Done!

Triggers		
NAME	Event Type	Filter
Cleanup Click Trigger	All Elements	Click Classes contains gtm_click_cleanup
GAinTemplate	Page View	GAinTemplate equals true
Main Click Trigger	All Elements	Click Classes contains gtm_click_main
Setup Click Trigger	All Elements	Click Classes contains gtm_click_setup

# Create Click Event

X Google Analytics - Event - Main Click

Tag Configuration

Tag type

 **Universal Analytics**  
Google Analytics

Tracking ID [?](#)  
{{AnalyticsId}}

Track Type

Event

Category

Button Clicks

Action

Click

Label

{{Click Text}}

Triggering

Firing Triggers [+](#)

 **Main Click Trigger**  
All Elements [-](#)

**ADD EXCEPTION**

# Preview & Check GA

보기: 활성 사용자 이벤트(최근 30분 기준)

이벤트를 전송한 활성 사용자: **1**(전체 중 **100%**)

이벤트 액션		이벤트 라벨
1.	Click	Clean up
2.	Click	Main
3.	Click	Set up

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# Brand New Scroll Depth Tracking

# Brand New Scroll Depth Tracking

Scroll 관련 변수를 활성화!

Scrolling

Scroll Depth Threshold

Scroll Depth Units

Scroll Direction

# Brand New Scroll Depth Tracking

Scroll Depth로 트리거를 생성!

User Engagement



Element Visibility



Form Submission



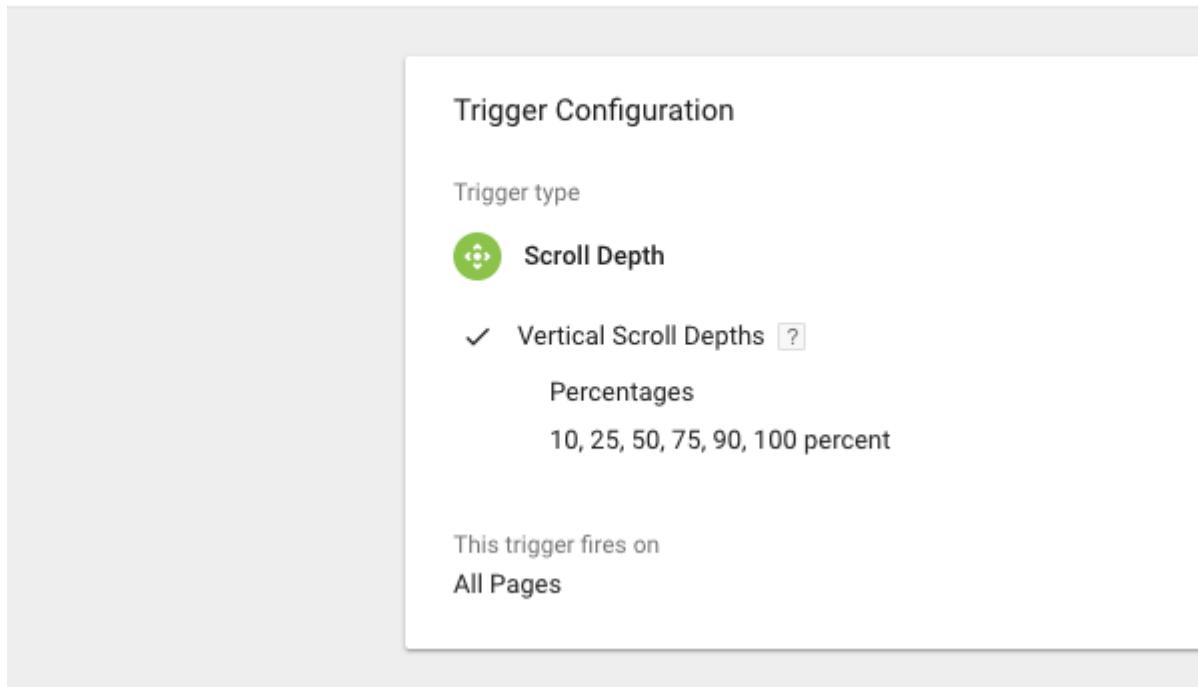
Scroll Depth



YouTube Video

# Brand New Scroll Depth Tracking

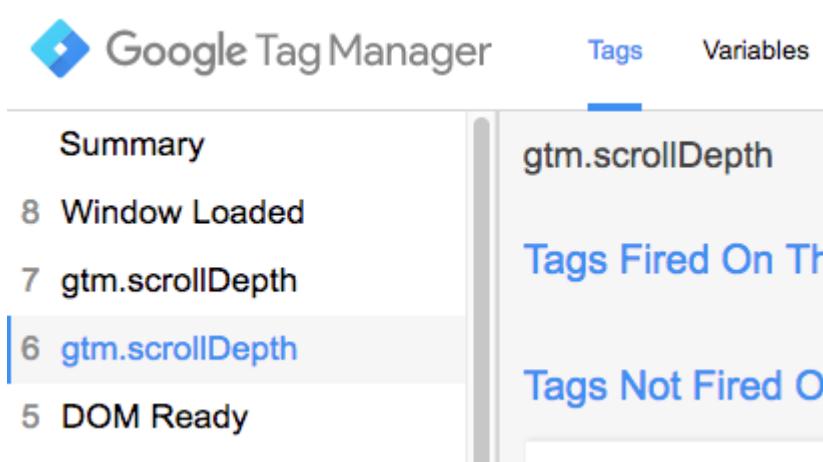
## Page Scroll Trigger



The screenshot shows a 'Trigger Configuration' dialog box. At the top, it says 'Trigger type' and has a green circular icon with a white crosshair symbol next to the text 'Scroll Depth'. Below that, there's a checked checkbox labeled 'Vertical Scroll Depths' with a question mark icon. Underneath, it says 'Percentages' and lists '10, 25, 50, 75, 90, 100 percent'. At the bottom, it says 'This trigger fires on All Pages'.

# Brand New Scroll Depth Tracking

gtm.scrollDepth 이벤트를 확인하고



# Brand New Scroll Depth Tracking

관련 변수들에 쌓이는 값을 확인한 뒤,

Tags	Variables	Data Layer	
Scroll Depth Threshold	Data Layer Variable	number	10
Scroll Depth Units	Data Layer Variable	string	'percent'
Scroll Direction	Data Layer Variable	string	'vertical'

## Tag Configuration

Tag type



**Universal Analytics**  
Google Analytics

Track Type

Event

Category

PageScroll

Action

`{{Scroll Depth Threshold}}%`

Label

vertical - {{Page Path}}

Non-Interaction Hit

True

Google Analytics Settings [?](#)

`{{GASettings}}`

## Triggering

Firing Triggers



**Page Scroll Trigger**  
Scroll Depth