Write and Submit your first Linux Kernel Patch

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github.com/tapaswen-pathak/talk-and-workshops-Linux-kernel-IGIT.git

Documentation/HOWTO

kernel.org/doc/Documentation/CodingStyle

What are we not going to cover?

How to create one kernel?

I hope you all can C.

What we are going to cover

Git with GitHub and also elsewhere

Linux kernel coding style

Generating a patch and emailing it

Getting started with tools to cleanup Linux Kernel

Want to get paid while contributing?

Your Questions!

Let's Git!

Git Setup

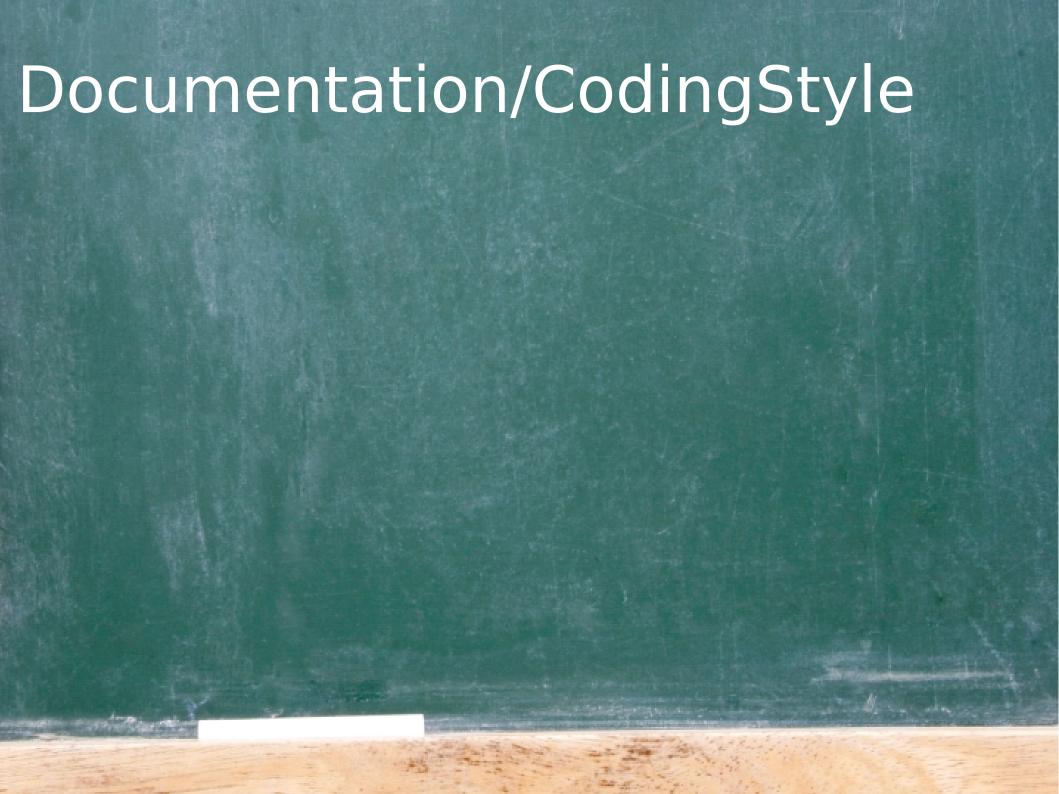tapaswenipathak.wordpress.com/2014/08/26/git-setup/

git - the simple guide

git clone

`git clone git://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git`

URL : git.kernel.org/cgit/linux/kernel/git/torvalds/linux.git/

Working with linux-next

```
$ git remote add linux-next \

git://git.kernel.org/pub/scm/linux/kernel/git/next/linux-
next.git

$ git fetch linux-next

$ git fetch --tags linux-next

... # later on

$ git remote update
```

Documentation/CodingStyle

Documentation/CodingStyle

Why Care?

"It is not merely a matter of aesthetics that programs should be written in a particular style. Rather there is a psychological basis for writing programs in a conventional manner: programmers have strong expectations that other programmers will follow these discourse rules. If the rules are violated, then the utility afforded by the expectations that programmers have built up over time is effectively nullified."

– Soloway & Ehrlich

Use tabs

All tabs are 8 characters

80 character line limit

```c
if (error != -ENODEV) {
        foo();
        bar();
}
```

```c
if (error != -ENODEV) {
        foo();
        bar();
} else {
        report_error();
        goto exit;
}
```

```c
if (error != -ENODEV)
        foo();
else
        goto exit;
```

```c
int function(int *baz)
{
        do_something(baz);
        return 0;
}
```

scripts/checkpatch.pl

drivers: media: platform: vivid: Fix possible null derefrence

Check for dev_fmt being null before derefrencing it, to assign it
to planes.

Found using Coccinelle.

Signed-off-by: Tapasweni Pathak <tapaswenipathak@gmail.com>
Acked-by: Julia Lawall <julia.lawall@lip6.fr>
---
 drivers/media/platform/vivid/vivid-vid-out.c | 4 +++-
 1 file changed, 3 insertions(+), 1 deletion(-)

diff --git a/drivers/media/platform/vivid/vivid-vid-out.c b/drivers/media/platform/vivid/vivid-vid-out.c
index 39ff79f..8f081bb 100644
--- a/drivers/media/platform/vivid/vivid-vid-out.c
+++ b/drivers/media/platform/vivid/vivid-vid-out.c
@@ -114,7 +114,7 @@ static int vid_out_buf_prepare(struct vb2_buffer *vb)
 {
	struct vivid_dev *dev = vb2_get_drv_priv(vb->vb2_queue);
	unsigned long size;
-	unsigned planes = dev->fmt_out->planes;
+	 unsigned planes;
	unsigned p;

	dprintk(dev, 1, "%s\n", __func__);
@@ -122,6 +122,8 @@ static int vid_out_buf_prepare(struct vb2_buffer *vb)
	if (WARN_ON(NULL == dev->fmt_out))
		return -EINVAL;

+	 planes = dev->fmt_out->planes;
+
	if (dev->buf_prepare_error) {
		/*
		 * Error injection: test what happens if buf_prepare() returns
--
1.7.9.5

git diff

git commit

git show

git format-patch

git send-email

scripts/get_maintainer.pl

Checklist

- Kernel builds with patch applied
- Correct "From:" address
- Concise "Subject:"
- Explain the patch
- Signed-off-by

Let's cleanup Linux Kernel!

Blog Link.

I code for food and something more.

Outreachy (Previously OPW)

GSOC

Questions?

kernelnewbies.org