

The Computing Challenge

Software Development Methodologies

J Allen J Edwards

Software Development:

A set of computer science activities dedicated to the process of creating, designing, deploying and supporting software (IBM)

```
mirror_mod = modifier_obj
# Post mirror object to mirror
mirror_mod.mirror_object = True

if operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
elif operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
elif operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

# selection at the end - add
modifier_obj.select = 1
mirror_obj.select = 1
bpy.context.scene.objects.active = bpy.context.selected_objects[0]
bpy.context.selected_objects[0].name = one.name
data.objects[one.name].select = 1
print("please select exactly one object")

- OPERATOR CLASSES ---

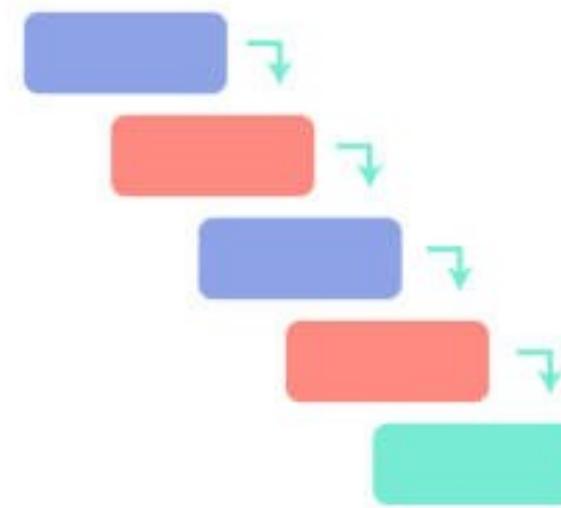
@types.Operator:
def execute(self, context):
    # X mirror to the selected object.mirror_mirror_x"
    mirror_x"
    return {'FINISHED'}
```

Software Development Steps



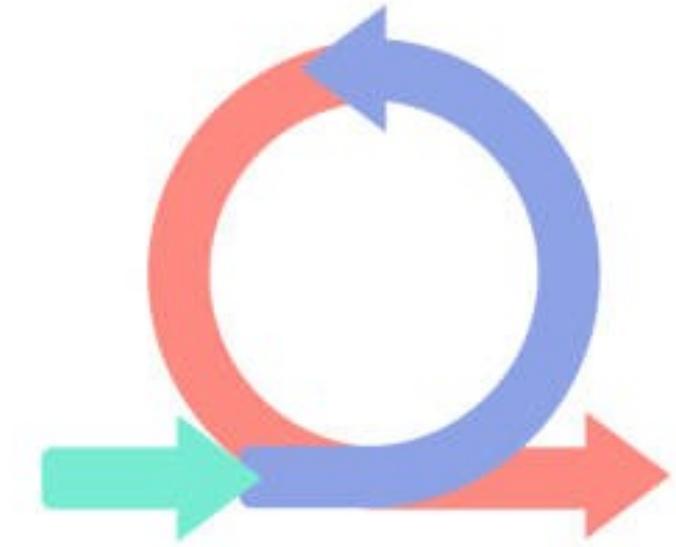
These steps may be repeated during the development process

Software Development Methods



Traditional

VS



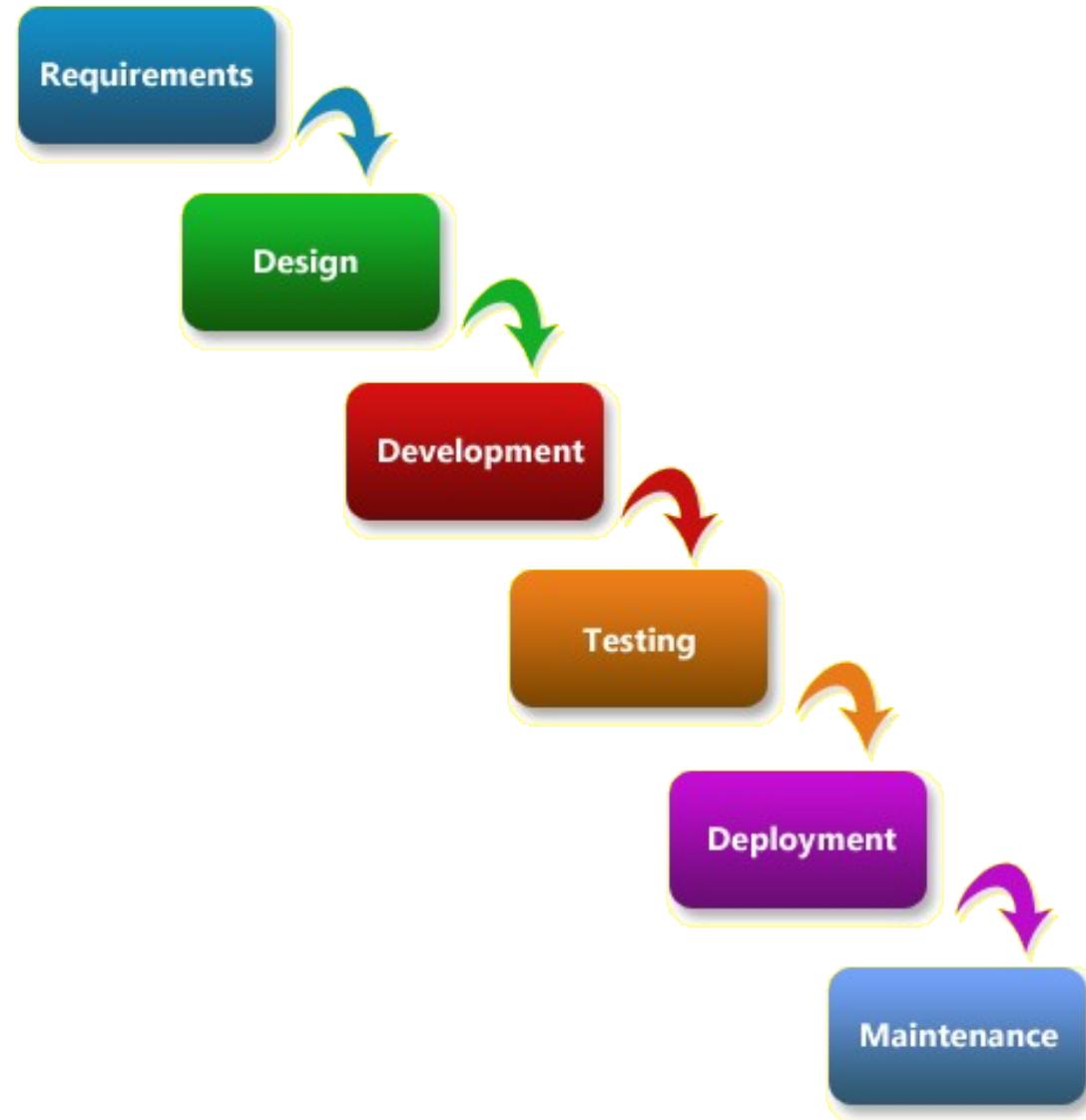
Agile

Waterfall

A linear, sequential approach to software development.

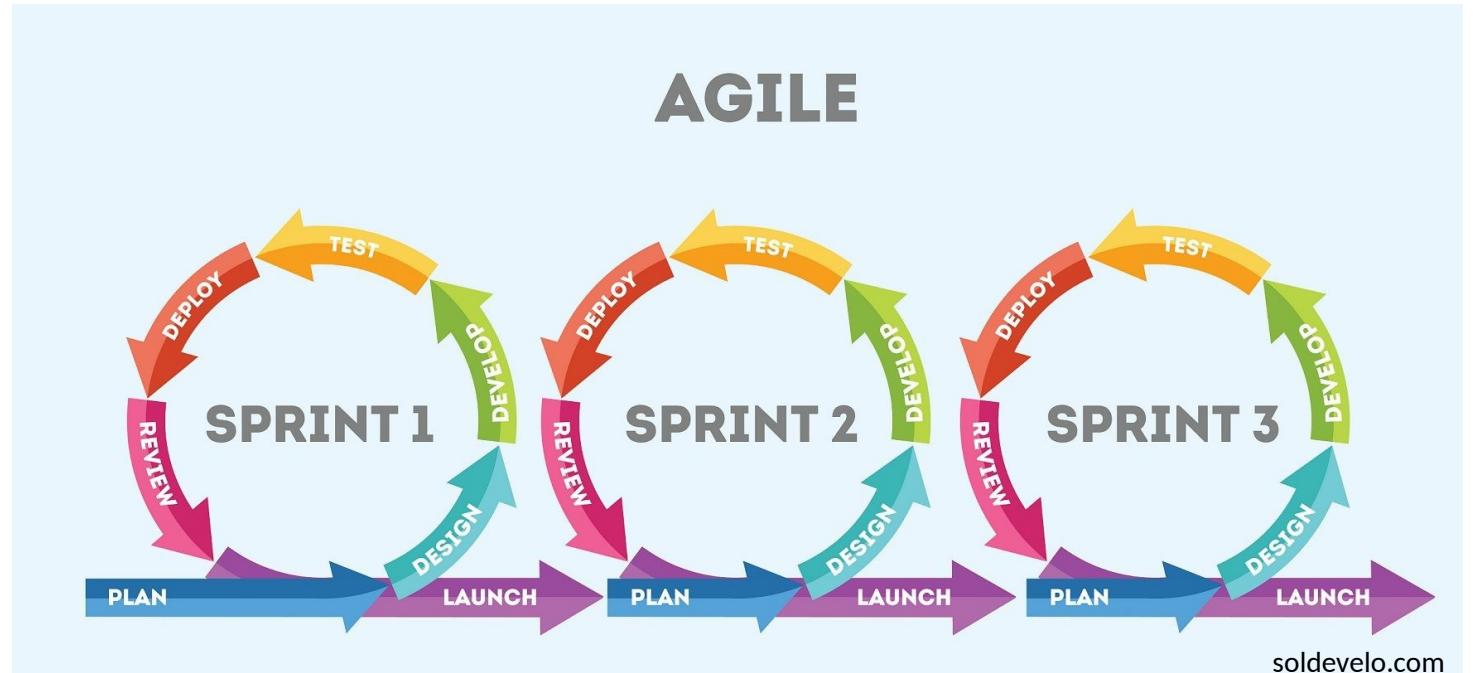
Each phase is completed before moving onto the next.

Can you think of any issues with this model?



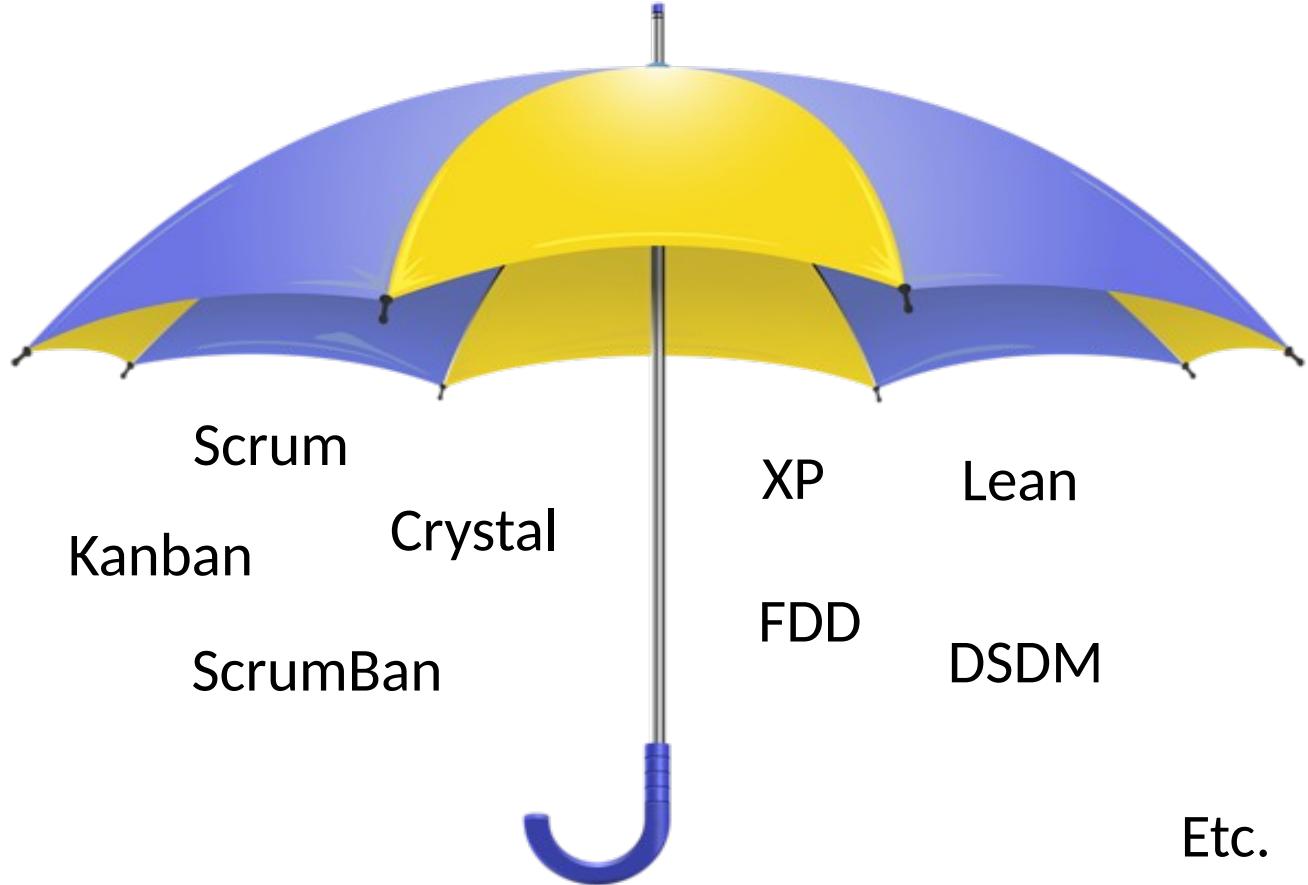
Agile

- An iterative, incremental approach to software development
- Each iteration builds on the last until the project is completed



"The most fundamental problem in software development is complexity. There is only one basic way of dealing with complexity: divide and conquer." Bjarne Stroustrup

Agile: an umbrella term for a set of frameworks



Common Practices in Agile Frameworks

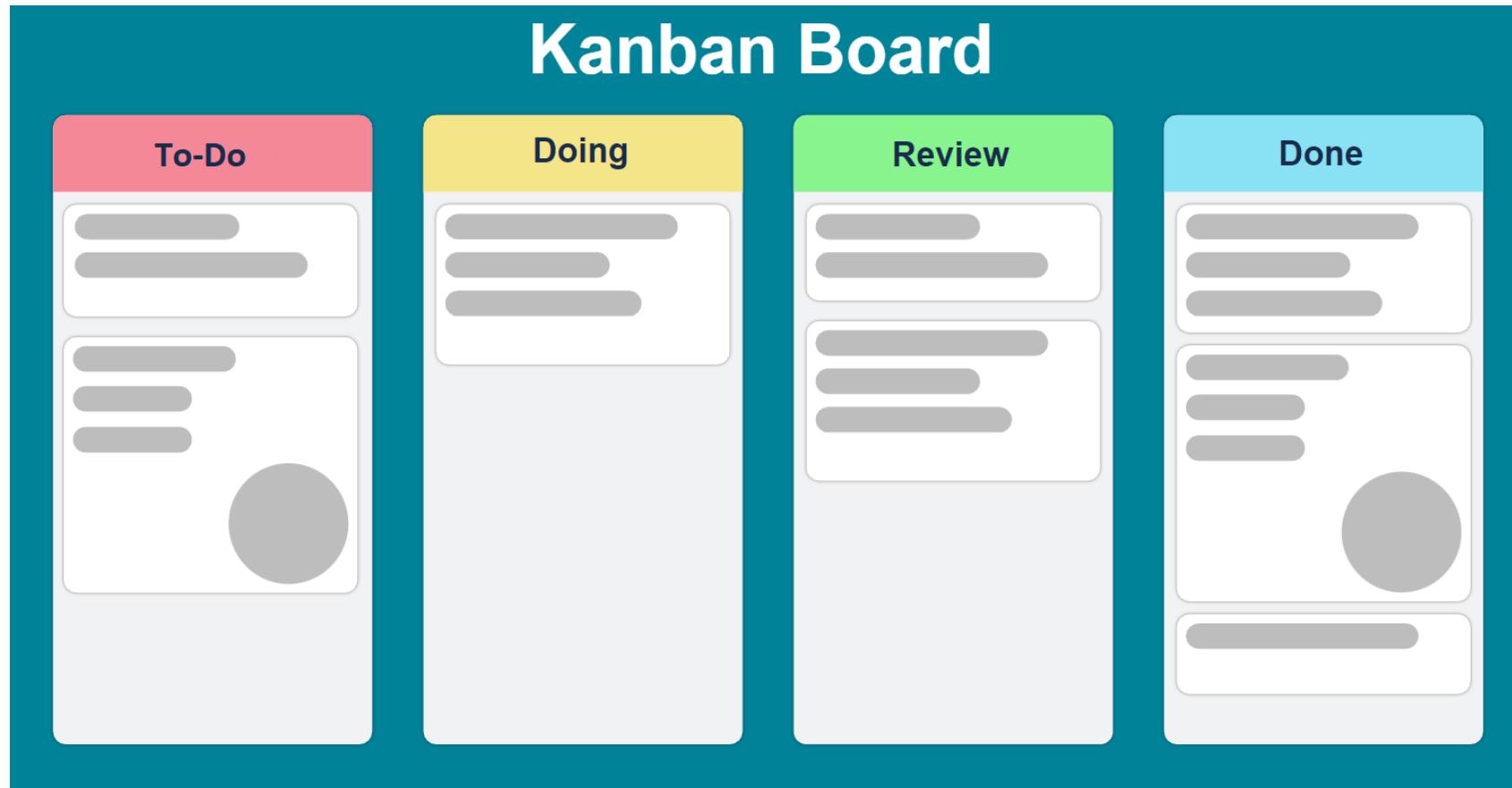
- Kanban boards
- Daily meetings



Kanban Board

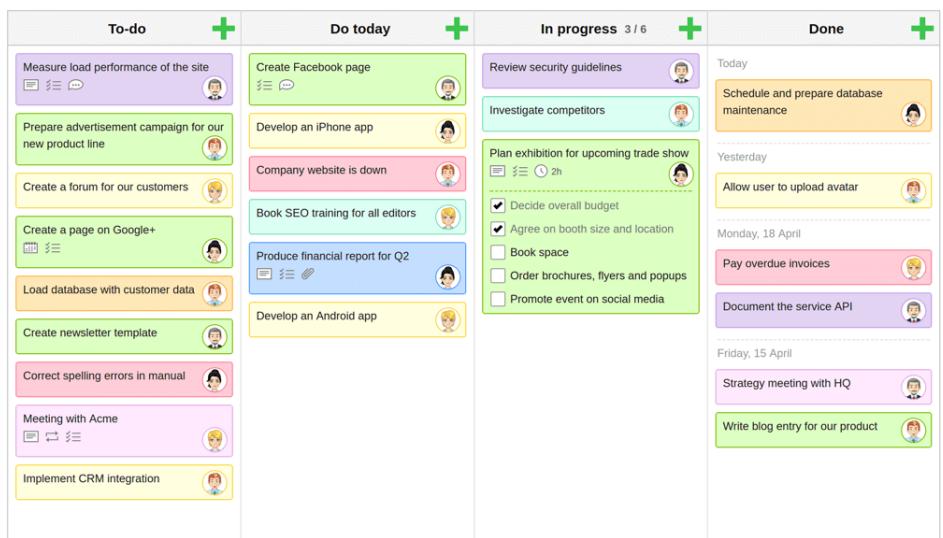
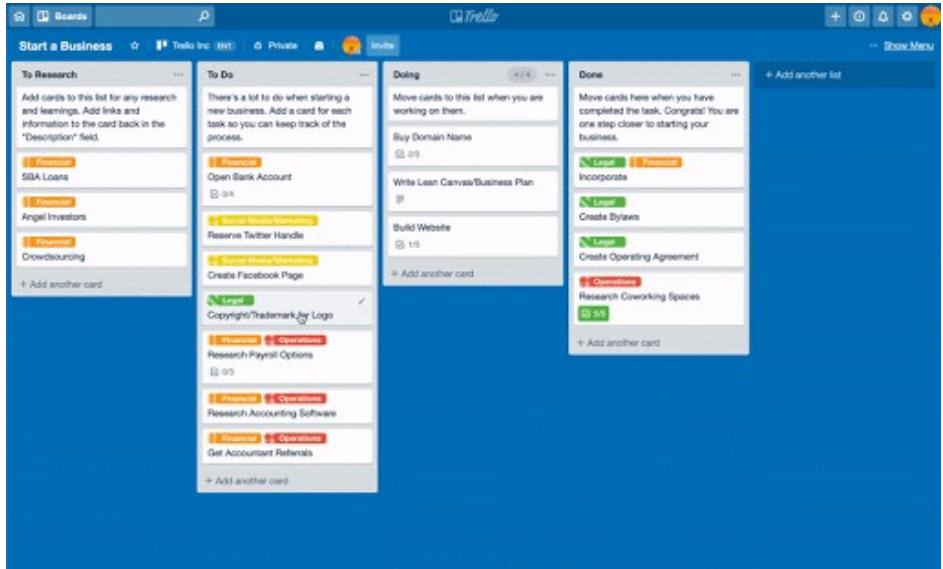
Kanban a Japanese word meaning ***visual card***

A project management tool designed to help visualize work



It can take
the form
of a
physical
board..





.. or a
digital
board

Microsoft Planner: A Demo



Daily Stand-Up Meeting



- An important event in Agile software development
- A daily meeting with the Agile team
- Typically happens first thing in the morning before the team begins work
- Usually limited to 15 minutes maximum





The Three Questions

- What did you do yesterday?
- What will you do today?
- Are there any impediments that might get in the way?

Dodgy Stand-Up Example



Good Stand-Up Meetings

- Are not simply a status meeting
- A conversation within the team about progress
- Everyone should be listening carefully and thinking how can I help the other person so that we get nearer to the sprint goal



Your Teams

- Should start each day with a stand-up meeting
- Will be expected to carry out a stand-up meeting in the Thursday labs
- Should create a Kanban Board





Have a **break**, have a 

{

Demo Time;

}

Today's Lab Work

- Today in the lab you will be doing something a little more challenging using the concepts from this lecture.

