

Prototypes are essentially a way to test the boundaries of what you can and cannot do for your user stories. Essentially it's just a dummy application that's only use is to test whether or not a solution IS possible for given problem. For instance, you would write a prototype if you wanted to see if your server can handle over 1,000 requests at a time. So you write a script that sends a request to your server 1,000 times. The functionality isn't what's important, it's making sure that the task is possible and that you have a clear idea of how to do it.

Tracer bullets are about building an end to end, minimal value-able thing but real implementation of a use case, that is used for a quick feedback loop, i.e. whether or not you are building the right thing (hit the target) and based on feedback you can adjust your aim and fire a new tracer bullet. Tracer bullets are used for "Skeleton Applications" which are just shells of applications that don't contain much (if any) functionality, but walk through the extent of the program's life. i.e. connects to the client, connects to the database, queries the database . The skeleton application is basically the framework for your application. After you develop the skeleton application, you use tracer bullets to identify the core components of your application.

So, in summation, Prototypes are for testing whether a solution IS POSSIBLE, Tracer Bullets are for testing how accurate your current solution is to the ideal solution you want to create.

Orthogonality is that something does not affect its another property while its property changes. For example, when we paint a building, the durability of the building does not change.