SWING -
AN INTRODUCTION TO FRAMEWORKS

IF YOU WANT TO TRAVEL A SHORT DISTANCE, YOU **WALK**

IF YOU WANT TO TRAVEL REALLY FAR, YOU **FLY**

IF YOU WANT TO CODE UP SOMETHING SMALL,
YOU CODE IT UP FROM **SCRATCH**

IF YOU WANT TO CODE UP SOMETHING BIG, YOU

USE A FRAMEWORK

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FRAMEWORKS ARE COMPLICATED COLLECTIONS OF INTERCONNECTED CLASSES

PLANES ARE COMPLICATED COLLLECTIONS OF INTERCONNECTED MACHINERY

USING A FRAMEWORK GIVES WAY MORE POWER, BUT A LOT LESS CONTROL THAN CODING FROM SCRATCH

FLYING A PLANE GIVE YOU ENORMOUS POWER, BUT A LITTLE LESS CONTROL THAN WALKING

IN USING A FRAMEWORK, THE REAL CHALLENGE IS UNDERSTANDING HOW DIFFERENT CLASSES AND EVENTS IN THE FRAMEWORK INTERACT WITH EACH OTHER

IN FLYING A PLANE, A BIG PART OF THE CHALLENGE IS UNDERSTANDING HOW MACHINERY AND SYSTEMS INTERACT WITH EACH OTHER

TO FLY A PLANE..

DRESS THE PART

GET THE LITTLE DETAILS RIGHT AND TRUST THE PLANE TO DO THE REST

"LISTEN" TO THE PLANE - WATCH THE CONTROLS PAY ATTENTION TO THE ENVIRONMENT, AND RESPOND ACCORDINGLY

TO USE A FRAMEWORK..

DRESS THE PART..IMPLEMENT INTERFACES AND OVERRIDE CLASS METHODS AS YOU NEED TO

GET THE LITTLE DETAILS RIGHT - PUT IN SOME BITS OF BOILERPLATE CODE, AND TRUST THE FRAMEWORK TO DO THE REST

"LISTEN" TO THE FRAMEWORK BY SETING UP LISTENERS ON EVENTS IN THE FRAMEWORK AND RESPOND ACCORDINGLY

WE HAVE USED THE TERMS "EVENT" AND "LISTEN" A FEW TIMES, AND IT BEARS REPEATING -

LISTENING ON EVENTS IS AN IMPORTANT PART OF USING FRAMEWORKS CORRECTLY

A FRAMEWORK IS A COMPLICATED COLLECTION OF INTERCONNECTED CLASSES

YOU DO LITTLE BITS OF BOILERPLATE STUFF TO GET THE FRAMEWORK DOING ITS THING..

THAT SPECIFIC BIT IS CALLED AN

EVENT

AND THE PLACE WHERE YOU, THE PROGRAMMER, STAND BY WAITING FOR THE EVENT AND DECIDE HOW TO REACT TO THE EVENT IS CALLED

..AND THEN WAIT FOR THE FRAMEWORK TO SAY TO YOU – "THERE IS THIS SPECIFIC BIT THAT ONLY YOU CAN TAKE CARE OF – HERE IT IS FOR YOUR ATTENTION"

THE LISTENER

THIS LISTENER IS USUALLY A SINGLE FUNCTION, ENCAPSULATED IN AN ANONYMOUS INNER CLASS (OR THESE DAYS IN A LAMBDA EXPRESSION)

NOW, THE FRAMEWORK DOES NOT KNOW WHAT SPECIFIC EVENTS ARE IMPORTANT AND NEED YOUR INTERVENTION, SO IT PROVIDES A WAY FOR YOU TO LISTEN TO WHATEVER EVENTS MATTER TO YOU

THIS ANONYMOUS INNER CLASS IMPLEMENTS SOME INTERFACE SO THAT THE FRAMEWORK KNOWS HOW TO PASS THE EVENT OBJECT TO THE EVENT LISTENER

"REGISTER TO LISTEN ON AN EVENT"

IS HOW THIS IS PROCESS OF SIGNING UP FOR UPDATES IS DECRIBED

WHEN THE EVENT ACTUALLY OCCURS, THE FRAMEWORK WILL CALL THE LISTENER CODE AND PASS IT AN OBJECT WITH THE DETAILS OF WHAT JUST HAPPENED –

AN EVENT OBJECT

BTW, YOU CAN HAVE ANY NUMBER OF LISTENERS ON A GIVEN EVENT. WHEN THE