



PSP1

Lección 5: Estimaciones de tiempo y tamaño

PSP1

- ▶ **Objetivo de PSP1:**
 - ▶ Estimar tiempo y tamaño inicial
 - ▶ **Entradas al proceso:**
 - ▶ Buenos requisitos
 - ▶ Datos históricos
 - ▶ Para que la estimación de tamaño inicial y de tiempo sea lo mas aproximada posible necesitáis un buen diseño conceptual.
 - ▶ Para ello debes refinar el diseño conceptual hasta identificar partes que seas capaz de identificar como partes que sabes desarrollar.
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PSP1

- ▶ A continuación debes buscar partes similares a la tuya en tu repositorio de programas. Sólo si no lo encuentras estimas por intuición.
- ▶ PSP1 basa esta descomposición en partes en estimación por proxies.
- ▶ En vuestro caso proxy = clase
- ▶ Para trabajar con los proxies estos son catalogados según el tipo de los mismos, que tu generas habitualmente.
- ▶ Además, se debe determinar el número de items del proxy. Para vosotros item = método



PSP1 Resumen del Plan de Proyecto - 1

- ▶ El Resumen del Plan de Proyecto incluye una nueva sección de resumen.
- ▶ La sección resumen incluye productividad planificada, real, y a la fecha.
- ▶ Todos los valores excepto el tamaño real total son calculados



The screenshot displays the 'PSP1 Project Plan Summary' window. At the top, there are fields for Student (Ivov), Program (Assignment 3), Instructor (ivov), Start Date (13-Mar-00), End Date, and Language (C). Below this is a 'Summary' table with columns for Productivity, Plan, Actual, and To-Date, all showing 0.0. The main area contains four summary tables:

Plan Size	Actual Size	To-Date
Blank (B)	0	0
Deleted (D)	0	0
Modified (M)	0	0
Added (A)	0	0
Reused (R)	0	0
Added & Modified (AM)	0	0
Total (T)	0	0
New Plausible (NP)	0	0
Estimated ASM (E)	0	0

Phase	Plan	Actual	To-Date	To-Date%
PLAN	0.0	0	0	0.0%
DLD	0.0	0	0	0.0%
CODE	0.0	0	0	0.0%
COMPILE	0.0	0	0	0.0%
UT	0.0	0	0	0.0%
PM	0.0	0	0	0.0%
Total	0	0	0	

Phase	Plan	Actual	To-Date	To-Date%
PLAN	0	0	0	0.0%
DLD	0	0	0	0.0%
CODE	0	0	0	0.0%
COMPILE	0	0	0	0.0%
UT	0	0	0	0.0%
PM	0	0	0	0.0%
Total	0	0	0	

Phase	Plan	Actual	To-Date	To-Date%
PLAN	0	0	0	0.0%
DLD	0	0	0	0.0%
CODE	0	0	0	0.0%
COMPILE	0	0	0	0.0%
UT	0	0	0	0.0%
PM	0	0	0	0.0%
Total	0	0	0	

PSP1 Resumen del Plan de Proyecto -2

- ▶ Productividad planificada, real, y a la fecha es automáticamente calculada.
- ▶ Es el número de unidades de tamaño añadido y modificado por hora.

$$\text{Productividad} = \text{Tamaño A\&M} / \text{Tiempo Total de Desarrollo} * 60$$

Summary	Plan	Actual	To-Date
Productivity	0.0	0.0	0.0



Plantilla de Reporte de Prueba

- ▶ Use este formulario para registrar información de cada prueba.
 - ▶ Qué prueba fue ejecutada
 - ▶ Cuál información de prueba fue usada
 - ▶ Resultados que fueron obtenidos
- ▶ Útil para
 - ▶ Desarrollo y registro de casos de prueba
 - ▶ Realización de pruebas de regresión



PSP1

▶ Pasos:

- ▶ 1 Completar el diseño conceptual para poder realizar la estimación de tamaño
- ▶ 2 Estimar el tamaño de las partes del diseño conceptual, mediante la tipificación de las mismas en:
 - ▶ Tipo
 - ▶ Tamaño (en función del rango que se ha establecido)
 - ▶ Número de items
- ▶ 3 Estimar el tamaño de cualquier otro tipo de código, reused, base, ...
- ▶ 4 Se rellena automáticamente el Añadido&modificado Estimado = E = estimated proxy size
 - ▶ Realmente viene a medir el esfuerzo estimado, el que tu vas a gastar en construir lo que quieres construir. Aquí se computa todo lo que para ti conlleva esfuerzo alguno.



PROBE y la Plantilla de Estimación del Tamaño

▶ Empezando con PSP1, el método PROBE es usado para realizar estimaciones del tamaño y del tiempo.

▶ La Plantilla de Estimación del Tamaño es usado para

- ▶ Registrar la entrada al método PROBE
- ▶ Calcular el tamaño y tiempo estimado
- ▶ Registrar el tamaño real



Parameter	Value	Size	Time
Added Size (A)	0	0	0
Estimated Add (E)	0	0	0
PROBE method used (A,B,C,D)	0	0	0
Conversion (P%)	0	0	0
Regression Parameter (B)	0	0	0
Regression Parameter (D)	0	0	0
Projected Add (P)	0	0	0
Estimated Total Size (T)	0	0	0
Estimated Total New Reusable (R)	0	0	0
Estimated Total Development Time	0	0	0
Prediction Range	0	0	0
Upper Prediction Interval	0	0	0
Lower Prediction Interval	0	0	0
Prediction Interval Percent	70%	70%	70%

Identificar y dimensionar Proxies

- ▶ Partes añadidas son nuevas partes que deben ser desarrolladas y su tamaño debe ser estimado.
- ▶ El tamaño de una parte añadida es determinado usando un proxy.
 - ▶ Identificar el tipo de parte, ej. Cálculo, E/S, etc.
 - ▶ Estimar el número de ítems, ej. métodos
 - ▶ Estimar el tamaño relativo, ej. Muy pequeño, pequeño, medio, grande, o muy grande.
 - ▶ Encontrar el tamaño de un ítem de este tipo de parte y tamaño relativo en la tabla de tamaño relativa
 - ▶ Calcular el tamaño estimado = tamaño de un ítem * número de ítems



Estimar otros tamaños de elementos

- ▶ Partes base son partes existentes que serán cambiadas al añadir, borrar o modificar.
- ▶ La estimación del tamaño de una parte base es su tamaño real y una estimación de las adiciones, eliminaciones y modificaciones.
- ▶ Las partes reusadas son partes que son usadas sin modificación.
- ▶ La estimación del tamaño de una parte reusada es su tamaño real.



Estimando Partes Base

- ▶ Durante la planificación, inserta para cada parte base:
 1. el nombre de la parte base o use el combo box para seleccionar una parte de la biblioteca de partes
 2. el tamaño planificado de la parte base
 - inserta el tamaño base si la parte no fue seleccionada de la biblioteca de partes
 - inserta el tamaño estimado borrado, modificado y añadido

Parts: Base		Plan				Actual			
ID	Name	Base	Del.	Mod.	Add	Base	Del.	Mod.	Add
▶	REP 1								
Base TOTAL		0	0	0	0	0	0	0	0

Estimando Partes Añadidas

- ▶ Durante la planificación, inserte cada parte añadida
 1. Inserte el nombre de la parte
 2. Seleccione un tipo de parte
 3. Inserte el número de ítems planificados
 4. Inserte el tamaño relativo planificado
 5. El tamaño planificado es calculado automáticamente

Parts: Added		Part Type	Plan			Actual			
ID	Name		Items	Rel. Sz.	Size *	Items	Size *		
▶	REP 1	2	3	0	4	5	0.0	0	0
Added Parts TOTAL			0			0			

Ejemplo Rangos de tamaño de clase en C++

Tipo	LOC por item				
	VS	S	M	L	VL
Cálculo	2.34	5.13	11.25	24.66	54.04
Datos	2.60	4.79	8.84	16.31	30.09
I/O	9.01	12.06	16.15	21.62	28.93
Lógica	7.55	10.98	15.98	23.25	33.83
Set-up	3.88	5.04	6.56	8.53	11.09
Texto	3.75	8.00	17.07	36.41	77.66



Estimando Partes Reusadas

▶ Durante la planificación, inserte cada parte reusada:

1. el nombre de la parte reusada o use el combo box para seleccionar un parte de la biblioteca de partes
2. el tamaño planificado de la parte de reuso si la parte no fue seleccionada de la biblioteca de partes.

ID	Name	Plan	Actual
▶ berj	1	2	0
		0	0

Reuse Object TOTAL

0	0
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PSP1

► Pasos:

- 5 Elegir el procedimiento de estimación:
 - A, o B: Si hay suficientes datos y tienen una correlación superior a 0,7
 - La diferencia entre uno y otro es el lugar del que toma los datos.
 - El método A utiliza los datos de “Estimated proxy size” y de “Actual total hours”
 - El método B utiliza los datos de “Plan added and modified size” y de “Actual total hours”.
 - C, cuando fallan A o B bien porque la correlación es menor que 0,7 o porque no hay suficientes datos
 - D cuando no hay ningún dato anterior.

Estimar el Tamaño y Tiempo Proyectado

► El tamaño y tiempo proyectado son calculados a partir del tamaño de la parte estimada usando datos históricos y el método PROBE A, B, C, o D.

► La hoja de cálculo de PROBE automatiza estas operaciones

PROBE Calculation Worksheet		Size	Time
Added Size (A)	$A=BA+PA$	0	
Estimated ASM (E)	$E=BA+PA+M$	0	
PROBE method used (A,B,C,D)		1	2
Correlation (R ²)		0	0
Regression Parameter (R0)	Size and Time	0	0
Regression Parameter (R1)	Size and Time	0	0
Projected ASM (P)	$P=B0+B1E$	0	
Estimated Total Size (T)	$T=P+B-C-M+R$	0	
Estimated Total New Reusable (NR)	sum of # items	0	
Estimated Total Development Time:	$Time=B0+B1E$		0
Prediction Range:	Range	0	0
Upper Prediction Interval:	$UPI=P+Range$	0	0
Lower Prediction Interval:	$LPI=P-Range$	0	0
Prediction Interval Percent:		70%	70%

Durante la planificación, selecciona el método PROBE

1. Seleccionar un método para el tamaño del programa (A, B, C, o D)
2. Seleccionar un método para el tiempo (A, B, C, o D)

Seleccionado Métodos PROBE

► El script PROBE incluye guías para seleccionar métodos.

► Los parámetros referenciados en el script pueden ser encontrados al final de la plantilla de estimación del tamaño.

Los datos de selección del método

1. Método C
2. Método B
3. Método A

The screenshot shows two sections of the PROBE software interface. The top section is titled 'PROBE Historical Data - Methods B and C' and contains a table with columns: ID, Name, End Date, Time, Plan A&M, E, Time, Actual A&M. Below this is 'PROBE Method Parameters - Methods B and C' with a table for R² Size, Beta0 Size, Beta1 Size, R² Time, Beta0 Time, and Beta1 Time. Red circles 1 and 2 point to 'Method C' and 'Method B' in the table. A bar chart icon is circled in red with a '4'. The bottom section is 'PROBE Historical Data - Method A' with a similar table structure. A red circle '3' points to 'Method A'. Another bar chart icon is circled in red with a '5'.

Datos del método que pueden ser graficados

4. Método C y B
5. Método A

Estimaciones transferidas al Resumen del Plan

► Estimaciones son automáticamente transferidas al Resumen del Plan

The screenshot shows two side-by-side views of the PROBE software. The left view is the 'PROBE Calculation Worksheet' with various input fields for parameters like 'Added Size (L)', 'Added Size (S)', 'Added Size (M)', 'Added Size (B)', 'Added Size (T)', 'Added Size (O)', 'Added Size (P)', 'Added Size (I)', 'Added Size (U)', 'Added Size (V)', 'Added Size (W)', 'Added Size (X)', 'Added Size (Y)', 'Added Size (Z)', 'Added Size (AA)', 'Added Size (AB)', 'Added Size (AC)', 'Added Size (AD)', 'Added Size (AE)', 'Added Size (AF)', 'Added Size (AG)', 'Added Size (AH)', 'Added Size (AI)', 'Added Size (AJ)', 'Added Size (AK)', 'Added Size (AL)', 'Added Size (AM)', 'Added Size (AN)', 'Added Size (AO)', 'Added Size (AP)', 'Added Size (AQ)', 'Added Size (AR)', 'Added Size (AS)', 'Added Size (AT)', 'Added Size (AU)', 'Added Size (AV)', 'Added Size (AW)', 'Added Size (AX)', 'Added Size (AY)', 'Added Size (AZ)', 'Added Size (BA)', 'Added Size (BB)', 'Added Size (BC)', 'Added Size (BD)', 'Added Size (BE)', 'Added Size (BF)', 'Added Size (BG)', 'Added Size (BH)', 'Added Size (BI)', 'Added Size (BJ)', 'Added Size (BK)', 'Added Size (BL)', 'Added Size (BM)', 'Added Size (BN)', 'Added Size (BO)', 'Added Size (BP)', 'Added Size (BQ)', 'Added Size (BR)', 'Added Size (BS)', 'Added Size (BT)', 'Added Size (BU)', 'Added Size (BV)', 'Added Size (BW)', 'Added Size (BX)', 'Added Size (BY)', 'Added Size (BZ)', 'Added Size (CA)', 'Added Size (CB)', 'Added Size (CC)', 'Added Size (CD)', 'Added Size (CE)', 'Added Size (CF)', 'Added Size (CG)', 'Added Size (CH)', 'Added Size (CI)', 'Added Size (CJ)', 'Added Size (CK)', 'Added Size (CL)', 'Added Size (CM)', 'Added Size (CN)', 'Added Size (CO)', 'Added Size (CP)', 'Added Size (CQ)', 'Added Size (CR)', 'Added Size (CS)', 'Added Size (CT)', 'Added Size (CU)', 'Added Size (CV)', 'Added Size (CW)', 'Added Size (CX)', 'Added Size (CY)', 'Added Size (CZ)', 'Added Size (DA)', 'Added Size (DB)', 'Added Size (DC)', 'Added Size (DD)', 'Added Size (DE)', 'Added Size (DF)', 'Added Size (DG)', 'Added Size (DH)', 'Added Size (DI)', 'Added Size (DJ)', 'Added Size (DK)', 'Added Size (DL)', 'Added Size (DM)', 'Added Size (DN)', 'Added Size (DO)', 'Added Size (DP)', 'Added Size (DQ)', 'Added Size (DR)', 'Added Size (DS)', 'Added Size (DT)', 'Added Size (DU)', 'Added Size (DV)', 'Added Size (DW)', 'Added Size (DX)', 'Added Size (DY)', 'Added Size (DZ)', 'Added Size (EA)', 'Added Size (EB)', 'Added Size (EC)', 'Added Size (ED)', 'Added Size (EE)', 'Added Size (EF)', 'Added Size (EG)', 'Added Size (EH)', 'Added Size (EI)', 'Added Size (EJ)', 'Added Size (EK)', 'Added Size (EL)', 'Added Size (EM)', 'Added Size (EN)', 'Added Size (EO)', 'Added Size (EP)', 'Added Size (EQ)', 'Added Size (ER)', 'Added Size (ES)', 'Added Size (ET)', 'Added Size (EU)', 'Added Size (EV)', 'Added Size (EW)', 'Added Size (EX)', 'Added Size (EY)', 'Added Size (EZ)', 'Added Size (FA)', 'Added Size (FB)', 'Added Size (FC)', 'Added Size (FD)', 'Added Size (FE)', 'Added Size (FF)', 'Added Size (FG)', 'Added Size (FH)', 'Added Size (FI)', 'Added Size (FJ)', 'Added Size (FK)', 'Added Size (FL)', 'Added Size (FM)', 'Added Size (FN)', 'Added Size (FO)', 'Added Size (FP)', 'Added Size (FQ)', 'Added Size (FR)', 'Added Size (FS)', 'Added Size (FT)', 'Added Size (FU)', 'Added Size (FV)', 'Added Size (FW)', 'Added Size (FX)', 'Added Size (FY)', 'Added Size (FZ)', 'Added Size (GA)', 'Added Size (GB)', 'Added Size (GC)', 'Added Size (GD)', 'Added Size (GE)', 'Added Size (GF)', 'Added Size (GG)', 'Added Size (GH)', 'Added Size (GI)', 'Added Size (GJ)', 'Added Size (GK)', 'Added Size (GL)', 'Added Size (GM)', 'Added Size (GN)', 'Added Size (GO)', 'Added Size (GP)', 'Added Size (GQ)', 'Added Size (GR)', 'Added Size (GS)', 'Added Size (GT)', 'Added Size (GU)', 'Added Size (GV)', 'Added Size (GW)', 'Added Size (GX)', 'Added Size (GY)', 'Added Size (GZ)', 'Added Size (HA)', 'Added Size (HB)', 'Added Size (HC)', 'Added Size (HD)', 'Added Size (HE)', 'Added Size (HF)', 'Added Size (HG)', 'Added Size (HH)', 'Added Size (HI)', 'Added Size (HJ)', 'Added Size (HK)', 'Added Size (HL)', 'Added Size (HM)', 'Added Size (HN)', 'Added Size (HO)', 'Added Size (HP)', 'Added Size (HQ)', 'Added Size (HR)', 'Added Size (HS)', 'Added Size (HT)', 'Added Size (HU)', 'Added Size (HV)', 'Added Size (HW)', 'Added Size (HX)', 'Added Size (HY)', 'Added Size (HZ)', 'Added Size (IA)', 'Added Size (IB)', 'Added Size (IC)', 'Added Size (ID)', 'Added Size (IE)', 'Added Size (IF)', 'Added Size (IG)', 'Added Size (IH)', 'Added Size (II)', 'Added Size (IJ)', 'Added Size (IK)', 'Added Size (IL)', 'Added Size (IM)', 'Added Size (IN)', 'Added Size (IO)', 'Added Size (IP)', 'Added Size (IQ)', 'Added Size (IR)', 'Added Size (IS)', 'Added Size (IT)', 'Added Size (IU)', 'Added Size (IV)', 'Added Size (IW)', 'Added Size (IX)', 'Added Size (IY)', 'Added Size (IZ)', 'Added Size (JA)', 'Added Size (JB)', 'Added Size (JC)', 'Added Size (JD)', 'Added Size (JE)', 'Added Size (JF)', 'Added Size (JG)', 'Added Size (JH)', 'Added Size (JI)', 'Added Size (JJ)', 'Added Size (JK)', 'Added Size (JL)', 'Added Size (JM)', 'Added Size (JN)', 'Added Size (JO)', 'Added Size (JP)', 'Added Size (JQ)', 'Added Size (JR)', 'Added Size (JS)', 'Added Size (JT)', 'Added Size (JU)', 'Added Size (JV)', 'Added Size (JW)', 'Added Size (JX)', 'Added Size (JY)', 'Added Size (JZ)', 'Added Size (KA)', 'Added Size (KB)', 'Added Size (KC)', 'Added Size (KD)', 'Added Size (KE)', 'Added Size (KF)', 'Added Size (KG)', 'Added Size (KH)', 'Added Size (KI)', 'Added Size (KJ)', 'Added Size (KK)', 'Added Size (KL)', 'Added Size (KM)', 'Added Size (KN)', 'Added Size (KO)', 'Added Size (KP)', 'Added Size (KQ)', 'Added Size (KR)', 'Added Size (KS)', 'Added Size (KT)', 'Added Size (KU)', 'Added Size (KV)', 'Added Size (KW)', 'Added Size (KX)', 'Added Size (KY)', 'Added Size (KZ)', 'Added Size (LA)', 'Added Size (LB)', 'Added Size (LC)', 'Added Size (LD)', 'Added Size (LE)', 'Added Size (LF)', 'Added Size (LG)', 'Added Size (LH)', 'Added Size (LI)', 'Added Size (LJ)', 'Added Size (LK)', 'Added Size (LL)', 'Added Size (LM)', 'Added Size (LN)', 'Added Size (LO)', 'Added Size (LP)', 'Added Size (LQ)', 'Added Size (LR)', 'Added Size (LS)', 'Added Size (LT)', 'Added Size (LU)', 'Added Size (LV)', 'Added Size (LW)', 'Added Size (LX)', 'Added Size (LY)', 'Added Size (LZ)', 'Added Size (MA)', 'Added Size (MB)', 'Added Size (MC)', 'Added Size (MD)', 'Added Size (ME)', 'Added Size (MF)', 'Added Size (MG)', 'Added Size (MH)', 'Added Size (MI)', 'Added Size (MJ)', 'Added Size (MK)', 'Added Size (ML)', 'Added Size (MN)', 'Added Size (MO)', 'Added Size (MP)', 'Added Size (MQ)', 'Added Size (MR)', 'Added Size (MS)', 'Added Size (MT)', 'Added Size (MU)', 'Added Size (MV)', 'Added Size (MW)', 'Added Size (MX)', 'Added Size (MY)', 'Added Size (MZ)', 'Added Size (NA)', 'Added Size (NB)', 'Added Size (NC)', 'Added Size (ND)', 'Added Size (NE)', 'Added Size (NF)', 'Added Size (NG)', 'Added Size (NH)', 'Added Size (NI)', 'Added Size (NJ)', 'Added Size (NK)', 'Added Size (NL)', 'Added Size (NM)', 'Added Size (NO)', 'Added Size (NP)', 'Added Size (NQ)', 'Added Size (NR)', 'Added Size (NS)', 'Added Size (NT)', 'Added Size (NU)', 'Added Size (NV)', 'Added Size (NW)', 'Added Size (NX)', 'Added Size (NY)', 'Added Size (NZ)', 'Added Size (OA)', 'Added Size (OB)', 'Added Size (OC)', 'Added Size (OD)', 'Added Size (OE)', 'Added Size (OF)', 'Added Size (OG)', 'Added Size (OH)', 'Added Size (OI)', 'Added Size (OJ)', 'Added Size (OK)', 'Added Size (OL)', 'Added Size (OM)', 'Added Size (ON)', 'Added Size (OO)', 'Added Size (OP)', 'Added Size (OQ)', 'Added Size (OR)', 'Added Size (OS)', 'Added Size (OT)', 'Added Size (OU)', 'Added Size (OV)', 'Added Size (OW)', 'Added Size (OX)', 'Added Size (OY)', 'Added Size (OZ)', 'Added Size (PA)', 'Added Size (PB)', 'Added Size (PC)', 'Added Size (PD)', 'Added Size (PE)', 'Added Size (PF)', 'Added Size (PG)', 'Added Size (PH)', 'Added Size (PI)', 'Added Size (PJ)', 'Added Size (PK)', 'Added Size (PL)', 'Added Size (PM)', 'Added Size (PN)', 'Added Size (PO)', 'Added Size (PP)', 'Added Size (PQ)', 'Added Size (PR)', 'Added Size (PS)', 'Added Size (PT)', 'Added Size (PU)', 'Added Size (PV)', 'Added Size (PW)', 'Added Size (PX)', 'Added Size (PY)', 'Added Size (PZ)', 'Added Size (QA)', 'Added Size (QB)', 'Added Size (QC)', 'Added Size (QD)', 'Added Size (QE)', 'Added Size (QF)', 'Added Size (QG)', 'Added Size (QH)', 'Added Size (QI)', 'Added Size (QJ)', 'Added Size (QK)', 'Added Size (QL)', 'Added Size (QM)', 'Added Size (QN)', 'Added Size (QO)', 'Added Size (QP)', 'Added Size (QQ)', 'Added Size (QR)', 'Added Size (QS)', 'Added Size (QT)', 'Added Size (QU)', 'Added Size (QV)', 'Added Size (QW)', 'Added Size (QX)', 'Added Size (QY)', 'Added Size (QZ)', 'Added Size (RA)', 'Added Size (RB)', 'Added Size (RC)', 'Added Size (RD)', 'Added Size (RE)', 'Added Size (RF)', 'Added Size (RG)', 'Added Size (RH)', 'Added Size (RI)', 'Added Size (RJ)', 'Added Size (RK)', 'Added Size (RL)', 'Added Size (RM)', 'Added Size (RN)', 'Added Size (RO)', 'Added Size (RP)', 'Added Size (RQ)', 'Added Size (RR)', 'Added Size (RS)', 'Added Size (RT)', 'Added Size (RU)', 'Added Size (RV)', 'Added Size (RW)', 'Added Size (RX)', 'Added Size (RY)', 'Added Size (RZ)', 'Added Size (SA)', 'Added Size (SB)', 'Added Size (SC)', 'Added Size (SD)', 'Added Size (SE)', 'Added Size (SF)', 'Added Size (SG)', 'Added Size (SH)', 'Added Size (SI)', 'Added Size (SJ)', 'Added Size (SK)', 'Added Size (SL)', 'Added Size (SM)', 'Added Size (SN)', 'Added Size (SO)', 'Added Size (SP)', 'Added Size (SQ)', 'Added Size (SR)', 'Added Size (SS)', 'Added Size (ST)', 'Added Size (SU)', 'Added Size (SV)', 'Added Size (SW)', 'Added Size (SX)', 'Added Size (SY)', 'Added Size (SZ)', 'Added Size (TA)', 'Added Size (TB)', 'Added Size (TC)', 'Added Size (TD)', 'Added Size (TE)', 'Added Size (TF)', 'Added Size (TG)', 'Added Size (TH)', 'Added Size (TI)', 'Added Size (TJ)', 'Added Size (TK)', 'Added Size (TL)', 'Added Size (TM)', 'Added Size (TN)', 'Added Size (TO)', 'Added Size (TP)', 'Added Size (TQ)', 'Added Size (TR)', 'Added Size (TS)', 'Added Size (TT)', 'Added Size (TU)', 'Added Size (TV)', 'Added Size (TW)', 'Added Size (TX)', 'Added Size (TY)', 'Added Size (TZ)', 'Added Size (UA)', 'Added Size (UB)', 'Added Size (UC)', 'Added Size (UD)', 'Added Size (UE)', 'Added Size (UF)', 'Added Size (UG)', 'Added Size (UH)', 'Added Size (UI)', 'Added Size (UJ)', 'Added Size (UK)', 'Added Size (UL)', 'Added Size (UM)', 'Added Size (UN)', 'Added Size (UO)', 'Added Size (UP)', 'Added Size (UQ)', 'Added Size (UR)', 'Added Size (US)', 'Added Size (UT)', 'Added Size (UU)', 'Added Size (UV)', 'Added Size (UW)', 'Added Size (UX)', 'Added Size (UY)', 'Added Size (UZ)', 'Added Size (VA)', 'Added Size (VB)', 'Added Size (VC)', 'Added Size (VD)', 'Added Size (VE)', 'Added Size (VF)', 'Added Size (VG)', 'Added Size (VH)', 'Added Size (VI)', 'Added Size (VJ)', 'Added Size (VK)', 'Added Size (VL)', 'Added Size (VM)', 'Added Size (VN)', 'Added Size (VO)', 'Added Size (VP)', 'Added Size (VQ)', 'Added Size (VR)', 'Added Size (VS)', 'Added Size (VT)', 'Added Size (VU)', 'Added Size (VV)', 'Added Size (VW)', 'Added Size (VX)', 'Added Size (VY)', 'Added Size (VZ)', 'Added Size (WA)', 'Added Size (WB)', 'Added Size (WC)', 'Added Size (WD)', 'Added Size (WE)', 'Added Size (WF)', 'Added Size (WG)', 'Added Size (WH)', 'Added Size (WI)', 'Added Size (WJ)', 'Added Size (WK)', 'Added Size (WL)', 'Added Size (WM)', 'Added Size (WN)', 'Added Size (WO)', 'Added Size (WP)', 'Added Size (WQ)', 'Added Size (WR)', 'Added Size (WS)', 'Added Size (WT)', 'Added Size (WU)', 'Added Size (WV)', 'Added Size (WW)', 'Added Size (WX)', 'Added Size (WY)', 'Added Size (WZ)', 'Added Size (XA)', 'Added Size (XB)', 'Added Size (XC)', 'Added Size (XD)', 'Added Size (XE)', 'Added Size (XF)', 'Added Size (XG)', 'Added Size (XH)', 'Added Size (XI)', 'Added Size (XJ)', 'Added Size (XK)', 'Added Size (XL)', 'Added Size (XM)', 'Added Size (XN)', 'Added Size (XO)', 'Added Size (XP)', 'Added Size (XQ)', 'Added Size (XR)', 'Added Size (XS)', 'Added Size (XT)', 'Added Size (XU)', 'Added Size (XV)', 'Added Size (XW)', 'Added Size (XX)', 'Added Size (XY)', 'Added Size (XZ)', 'Added Size (YA)', 'Added Size (YB)', 'Added Size (YC)', 'Added Size (YD)', 'Added Size (YE)', 'Added Size (YF)', 'Added Size (YG)', 'Added Size (YH)', 'Added Size (YI)', 'Added Size (YJ)', 'Added Size (YK)', 'Added Size (YL)', 'Added Size (YM)', 'Added Size (YN)', 'Added Size (YO)', 'Added Size (YP)', 'Added Size (YQ)', 'Added Size (YR)', 'Added Size (YS)', 'Added Size (YT)', 'Added Size (YU)', 'Added Size (YV)', 'Added Size (YW)', 'Added Size (YX)', 'Added Size (YY)', 'Added Size (YZ)', 'Added Size (ZA)', 'Added Size (ZB)', 'Added Size (ZC)', 'Added Size (ZD)', 'Added Size (ZE)', 'Added Size (ZF)', 'Added Size (ZG)', 'Added Size (ZH)', 'Added Size (ZI)', 'Added Size (ZJ)', 'Added Size (ZK)', 'Added Size (ZL)', 'Added Size (ZM)', 'Added Size (ZN)', 'Added Size (ZO)', 'Added Size (ZP)', 'Added Size (ZQ)', 'Added Size (ZR)', 'Added Size (ZS)', 'Added Size (ZT)', 'Added Size (ZU)', 'Added Size (ZV)', 'Added Size (ZW)', 'Added Size (ZX)', 'Added Size (ZY)', 'Added Size (ZZ)'. The right view is the 'Project Plan Summary' showing a table with columns: Plan, Actual, To-Do, and a 'Total' row. The table contains data for 'Program Size Summary' and 'Time in Phase'.

PSP1

▶ Pasos:

- ▶ 6 Con el esfuerzo total E que ya teníamos calculado ahora determinamos:
 - ▶ Tamaño total estimado = projected added & modified size (P)
 - ▶ Tiempo de desarrollo total estimado = estimated total development time (time)

$$y_k = \beta_0 + \beta_1 * x_k$$

$$\text{Added \& Modified _ Size} = \beta_{0size} + \beta_{1size} * (E)$$

$$\text{Development _ Time} = \beta_{0time} + \beta_{1time} * (E)$$



PSP1

▶ Pasos:

- ▶ 7 Elige el tipo de método PROBE para el tiempo
 - ▶ Si es el D tendrás que introducir el tiempo a mano
- ▶ 8 Intervalo de predicción:
 - ▶ El intervalo e predicción te dice el número de veces que los datos de tiempo y tamaño estimados caerán fuera del intervalo de precisión.
 - Por ejemplo el intervalo del 70% indica que el 30% de las veces el tamaño y el tiempo estimados caerán fuera del intervalo de precisión.
- ▶ 9 Rellena logs de tiempo y defectos
- ▶ 10 Rellena datos reales
- ▶ 11 Vuelve al resumen del proyecto y ahí rellenas el total del tamaño pero el real



En la fase de postmortem

► Durante el postmortem el tamaño real de las partes es incluido en la plantilla de estimación del tamaño.

► El tamaño real del programa es incluido en Total, bajo Real, en la sección Resumen del Tamaño del Programa del resumen del plan del proyecto.

Program Size Summary			
	Plan Size	Actual Size	To Date
Base (B)	0	0	
Deleted (D)	0	0	
Modified (M)	0	0	
Added (A)	0	0	
Revised (R)	0	0	
Added & Modified (ASM)	0	0	
Total (T)	0	0	
New Plausible (NP)	0	0	
Estimated ASM (E)	0	0	

The screenshot shows the 'PSP Size Estimating Template' software interface. It includes fields for Student, Program, Instructor, Start Date, End Date, and Language. Below these are sections for 'Parts Base', 'Parts Added', and 'Parts Revised', each with a table for Plan and Actual values. At the bottom, there is a 'PROSE Calculation Worksheet' with various metrics like Estimated Size (A), PROSE method used (A,B,C,D), Conversion (P/T), Regression Parameter (R), Proposed Size (P), Estimated Total Size (T), Estimated Total New Resources (NR), Estimated Total Development Time (TDEV), Production Range, Upper Production Interval, Lower Production Interval, and Production Interval Percent.

Registrando el Tamaño de la Parte Base

► Durante el postmortem, ingrese el tamaño de cada parte base

- Mida e ingrese el tamaño base real, borrado, modificado y añadido.

► Nota:

- Para una parte no estimada, añadirla e ingresar ceros en el plan.
- Para una parte no usada, ingrese ceros en real.

Parts: Base	Plan				Actual ¹			
	Base	Del.	Mod.	Add	Base	Del.	Mod.	Add
ID Name [er]								
Base TOTAL	0	0	0	0	0	0	0	0

Registrando el Tamaño de la Parte Añadida

▶ Durante el postmortem, ingrese el tamaño de cada parte añadida.

1. Mida e ingrese el número real de ítems.
2. Mida e ingrese el tamaño real.

▶ Nota:

- ▶ Para una parte no estimada, añadirla e ingresar ceros en el plan.
- ▶ Para una parte no usada, ingrese ceros en real.

Parts: Added			Plan			Actual	
ID	Name	Part Type	Items	Rel. Sz.	Size *	Items	Size *
▶ [ber]			0		0.0	1 0	2 0
Added Parts TOTAL						0	0

Registrando el Tamaño de la Parte Reusada

▶ Durante el postmortem, ingrese el tamaño de cada parte reusada.

1. Mida e ingrese el tamaño real de cada parte reusada.

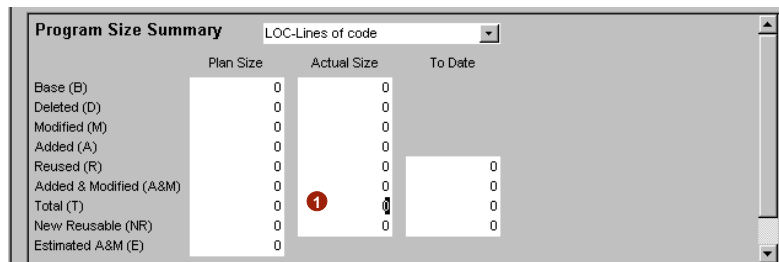
▶ Nota:

- ▶ Para una parte no estimada, añadirla e ingresar ceros en el plan.
- ▶ Para una parte no usada, ingrese ceros en real.

Parts: Reused			Plan	Actual
ID	Name			
▶ [ber]			0	1 0
Reuse Object TOTAL			0	0

Registrando el Tamaño Real Total

- ▶ Durante el postmortem
 1. Mida e ingrese el tamaño total real.



	Plan Size	Actual Size	To Date
Base (B)	0	0	
Deleted (D)	0	0	
Modified (M)	0	0	
Added (A)	0	0	
Reused (R)	0	0	0
Added & Modified (A&M)	0	0	0
Total (T)	0	1	0
New Reusable (NR)	0	0	0
Estimated A&M (E)	0		